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ABSTRACT

A study examined the differential effects of experiences prior to labor force entry, primarily in high school, on the later sex-typicality of occupations and earnings of non-college-bound men and women. The study analyzed data from the National Longitudinal Surveys of the Labor Market Experiences of Young Men and Women. (These surveys involved some 5,000 young men and 5,000 young women aged fourteen to twenty-four in 1968.) Through interviews that were conducted annually with these respondents between 1968 and 1978, information was obtained concerning respondent demographic characteristics, schooling and job training, attitudes and aspirations, and school experiences and school characteristics. Data revealed that sex-related differences in occupational choices depend upon differences in aspirations that predate high school entry. Schools serve primarily to reinforce sex-typed values as well as general and work-related values of parents and society. Occupational training in high school does have short term positive effects on labor force outcomes for both sexes. However, in the long run, being in traditionally female occupational programs is detrimental to white women. Black women in commercial programs fare better. Recommendations call for affirmative action for adults to provide role models for children. (Appended survey data constitutes approximately one-third of the report.) (MN)

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# HIGH SCHOOL, OCCUPATIONAL CHOICE AND SEX EQUITY

by
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High School, Occupational Choice, and Sex Equity

Abstract

Data from the National Longitudinal Surveys of the Labor Market Experiences of young men and women were used to answer the following three questions:

1. How do non-college youth develop their educational and occupational goals and aspirations and select their high school curriculum? Is curriculum selected on the basis of ascribed characteristics such as sex, race, and social class, or on the basis of personal preferences?

2. What part do high school experiences play in determining the later labor force outcomes, occupations and earnings of young non-college men and women, relative to the part played by parents and by post-high school experience?

3. How does the process of occupational and wage attainment differ by sex and by race? Are there substantial differences between college-bound and non-college-bound youth?

Differences between the choices of young non-college men and women in high school are primarily due to differences in aspirations and goals predating entry into high school rather than to specific developments during their high school years. Parents critically influence the early ambitions, goals and course selection of their children. Even the sex-typicality of the occupations children select reflects the sex-typicality of the occupations of their parents. In this sample of non-college youth, teachers were found to have little direct influence on aspirations and curriculum selection compared with the effects of family background, individual ability, and sex. Peers exert some influence, through their ambitions and goals. Although individual preferences play some role, they themselves are to a large degree determined by sex and social class.

High school experiences do affect the post high school choices of young men and women, especially the work experience they obtain, the occupations they enter and the hourly wages they earn. However, the contribution of high school mainly consists of reinforcing values, goals, and aspirations, rather than in providing direct employment skills. The attitudes and values youth develop are important in employment. However, there is a close relationship between the attitudes and values that schools reward and sex-typed aspirations and outcomes. Individuals who have internalized the work norms of society are likely to also accept and follow the sex-role norms as well.

Young men and women appear to develop along completely separate life tracks. The consequences of the differential tracking of the sexes are serious. Women who work full-time, full-year earn 60 percent of what men earn. The fact that men and women are concentrated in different occupations contributes in large part to the difference in their wages. Men who work in occupations employing a large proportion of women also receive lower wages than those

employed in occupations employing fewer women. No differences were found between white men and women in basic characteristics (years of schooling, IQ, parental background) that might lead to wage differences. Forty-six percent of the difference in wages is attributable to occupational segregation. The remainder of the difference is attributable to discrimination and to other factors not included in the model. In contrast, 70 percent of the difference between white and black men is attributable to differences in basic characteristics, none to occupational segregation, with 30 percent left unexplained.

Finally, the effects of high school experiences were not found to differ for non-college and college-bound students. Occupational training in high school has only short term positive effects on the labor force outcomes of non-college men and women. In the long run the effects of such training may actually be harmful to the well-being of young women since they lead to placement in female typed jobs. By the tenth year after high school the same factors associated with going to college and thus with higher wages and earnings, e.g., ability, a college preparatory curriculum, studying, also predict the later labor market successes of those not attending college.

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## CHAPTER 1: INTRODUCTION - BARRIERS TO EQUALITY BETWEEN MEN AND WOMEN

The substantial differences in occupational aspirations and expectations of men and women constitute one of the largest barriers to the economic equality of women and men. These aspirations and expectations affect youth's choices throughout the school years, the type of schooling and training they obtain, and, as a result, the types of work they can do once out of school. The work plans and aspirations of young women are unrealistic when compared with the actual experience of their older sisters. For example, fewer than one third of young women in the National Longitudinal Survey of Young Women planned to be working at age 35. Yet, in all likelihood the majority of these young women will be working. Forty-six percent of the mature women interviewed in the National Longitudinal Survey of Mature Women were in the labor force at age 35, and recent data indicate that the younger cohort will surpass them (Smith, 1979). Of course, part of this discrepancy may simply be a matter of the lower importance attached to work compared with family; of the 56 percent who said "married, keeping house, or raising a family," 79 percent were planning on working as well. Thus a total of 76 percent of the women planned to work or to combine work and marriage when in their 30s.

Access to high paying jobs has become a serious issue for women. Increasingly, in marriage women are assuming more equal roles with their husbands. Moreover, divorce rates imply that almost half of all couples marrying today will break up over their lifetimes and the greater longevity of women than of men leads to a substantial period of widowhood. This means that half of all women, and only slightly fewer children, will live for at least a period of time in a female-headed family (Bumpass and Rindfuss, 1979). About 18 percent of all families with chiildren are now headed by a woman. These families typically have low incomes. About 42 percent have incomes below the poverty line. By comparison, only six percent of husband-wife families with children are in poverty. Nor has child support provided much help. It has been estimated that about half of divorced, separated, and single women receive child support from the fathers of their children (Gordon et al., 1978). And those payments are very low, about $2,000 per family per year (1973 dollars), not enough to support a family without other income (Jones et al., 1976). In spite of their need for income, women have traditionally been employed in low wage jobs or even discouraged from working.

Of a number of policies and practices that perpetuate the second class status of women, occupational segregation is believed to be one major cause of wage differences between the sexes. Two-fifths of all women working are employed in only ten occupations -- secretary, retail trade salesworker, bookkeeper, private household worker, elementary school teachers, waitress, typist, cashier, sewer and stitcher, and registered nurse. These occupations typically pay less than male jobs, even when education is taken into account (U.S. Department of Labor, 1977, No. 195). Women's median earnings are now only about 60 percent of men's even when they work full-time, year-round.

Although no one disagrees that occupational segregation contributes to wage differences between the sexes, there is some disagreement as to how important a part it plays. For example, one researcher (Beller, 1980) found a substantial differential: in 1967 women employed in male occupations (greater than 72 percent male) earned one-third more than women employed in other occupations, and men earned a full fifty percent more. However, after adjusting for education and hours worked, these differentials were reduced by about two-thirds; a significant net earnings differential between male and other occupations of around 12 percent remained. This indicates that the part played directly by occupational segregation may be small. Unfortunately, Beller compares the earnings of women in male occupations with those in all other types of occupations, integrated and female. In fact, most women are employed in highly female jobs. A more pertinent contrast would have been between the earnings of women in highly male jobs and women in highly female jobs. Other researchers have found substantial effects on earnings of moving from a female to a male occupation -- as much as $.33 per hour depending on education (Grasso and Shea, 1979) and as much as 20 percent, depending on skill level (Jusenius, 1976-77). In this report we provide some additional evidence as to the importance of occupational segregation in explaining variations in individual earnings and in explaining male-female earnings differences.

Once occupational segregation has been targeted as a major stumbling block to sex equity, then the question arises as to its causes, as a precondition for offering solutions. For example, raising the wages of women in female occupations has been proposed to increase wage equity. Besides assuming immediate impact, this proposal is premised on the assumption that even if women knew about their alternatives and even if overt discrimination were eliminated, women would still prefer to work in female occupations. That is, it assumes that one of the basic causes of occupational segregation is the preference of women for female occupations. Such preferences may be a result of rational consideration of various options, such as hypothesized by the human capital school. That is, women estimate that they will be less attached to the work force than men, working fewer years or intermittently; as a result they do not invest in schooling and training to the extent that men do. Actual commitments to home and family life may also cause differences in occupational choices. Women may choose female-type occupations because they allow more flexibility of schedules, require less commitment outside the office, and do not penalize for intermittent employment. In addition, other characteristics of jobs may be evaluated differently by women and men, for example, dirty or heavy work or hazardous conditions. However, preferences may also develop from social pressures -- expectations of approval or disapproval from parents, teachers, and peers -- for employment in certain types of jobs and not others.

According to the human capital school, women who expect to marry and raise children would be less committed to employment and less likely to obtain training. Sandell (1980), for example, finds that plans for employment are significantly related to post-school accumulation of human capital. We would also expect married women and those with children to be more likely to be employed in female-typical occupations, while single and childless

women would be more likely to be employed in male-typical occupations. Although, as predicted, full-time and full-year workers are more likely to be in male occupations, contrary to prediction, single women (but not those divorced or widowed) are only slightly more likely than married, spouse-present women to be employed in non-traditional occupations (Beller, 1980). Of course, marital status is not necessarily planned, which may account for the lack of difference between the groups. There is evidence that human capital differences between women in male and other occupations are declining as younger cohorts of women enter non-traditional occupations, and discrimination barriers have declined in importance in predicting wages (Beller, 1980). However, the overall declines in occupational segregation are small. If choice of occupation reflected actual work conditions only, we would expect greater similarity between the sexes until the point at which actual job and training choices are made -- soon after leaving school. In fact, the opposite is true -- larger differences exist prior to entry. Expectations and aspirations must play a large part in determining occupational choices.

Substantial sex differences in occupational aspirations exist in grade school and earlier (Masters and Wilkinson, 1976; Papalia and Tennent, 1975; Scheresky, 1976; Hewitt, 1975; Tully et al., 1976). Since at the same time there is evidence that such youth understand very little of the actual world of work, socialization pressures must be very important. If so, we would expect similar parent-teacher-peer factors to have totally opposite effects on men and on women; that is, young men would aspire to male-typical occupations while females with similar characteristics would aspire to female-typical occupations.

## Objective of Study

The purpose of this study is to describe the differential effects of experiences prior to labor force entry, primarily in high school, on the later sex-typicality of occupations and earnings of non-college bound men and women. Our discussion will focus on several important questions: 1) What is the relationship between sex-typicality of occupation and earnings? 2) How important are individual versus structural explanations of occupational selection and wage attainment of black and white men and women? 3) What is the process of socioeconomic attainment for non-college youth, and how does it differ by sex and race? 4) How important are high school experiences to labor force outcomes? In this chapter we will first discuss the importance of studying occupations and look at each of the above questions in greater detail. We will then describe the study we conducted to answer these questions, the data we used and the methods we followed. Finally, we will describe the characteristics of the non-college youth that we studied, comparing them with characteristics of all youth.

## The Importance of Occupation

Occupations are important for two reasons. First, they provide the person in a job or occupation with a distinct social position. Second,

they provide earnings (Duncan, Featherman and Duncan, 1972). According to early sociological theorists, societal inequality operates through differential rewards to social positions. The most "important" positions are the most highly rewarded, the least important receiving the poorest rewards (Davis and Moore, 1945). Importance is supposedly societally agreed upon; that is, individuals use roughly the same criteria in ranking positions. Thus when individuals are asked to rank occupations according to prestige, a high degree of reliability of the rankings is obtained. A prestige index obtained in this way is still in wide use. A second index that has been widely used is the Duncan Socioeconomic Index, an index of socioeconomic status based on the education and income levels of males in each particular occupation (Duncan, 1961).

According to these early functionalists, occupational status, and, as a result, earnings, are "achieved." That is, they result from an individual's ability and effort, rather than family background -- what you know, not whom you know. These factors are primarily individual in nature -- resources or liabilities. Although useful as a model, in practice such a model cannot well account for a number of empirical realities such as sex and race discrimination. Several theoretical approaches have been developed which provide alternative occupational classifications, depending on the hypothesis to be tested. One, which is based on a neo-Marxist classification of occupational data, identifies four class categories: employer, manager, worker, and petty bourgeoisie. In this approach, class is the central criterion for social position. Another approach derives from literature on the dual economy (Cain, 1976; Horan, 1978). This literature introduces two sectors, primary and secondary, from the nature of modern industrial capitalism. These sectors are roughly characterized by better jobs/unionized jobs in large firms, versus low paid jobs in small firms held by workers who are discriminated against and who have unstable working patterns (Cain, 1976). Several authors find substantial differences in income returns to individual characteristics such as education, race, and sex within each sector (Horan, 1978). In our discussion we combine a type of dual sector "class" model with a sex stratification model. Occupations are defined in terms of the proportion of women in them; however, we then look only at men and women who completed no college. Let us first look at the analysis of occupation in terms of male and female jobs.

## Occupational Sex-Typing and Earnings

Several studies have shown that the sex-typicality of the job does have a direct impact on earnings, women employed in male occupations making more than comparable women employed in female occupations (Grasso and Shea, 1979; Jusenius, 1976-77; Beller, 1980). There is evidence, however, that the sex-typicality of the job affects the earnings of youth who do not later attend college more than it affects the earnings of those who do attend college. Grasso and Shea (1979) found that being in a typically female job resulted in a substantial loss in earnings for female high school drop-outs; a smaller but significant loss for high school graduates, and no significant difference in hourly wages for those with some college but less than a degree. Jusenius (1976-77) divided her sample by the skill

level of the occupation. She found that being in a sex-typical occupation resulted in substantially reduced wages for women at the low or medium skill levels, net of work experience and other factors. At the highest skill levels sex typicality of occupation did not affect wages.[1] Beller (1980) found a small effect of occupational sex-typing on the wages of all women; however, she had few controls for other factors.

Economic rewards differ greatly between occupations with equal status and prestige. Such differences have in the past been substantially obscured by the use of occupational "prestige" or "socioeconomic status". Men and women have equal education, one of the major components of socioeconomic status; thus, they are more likely to have jobs with equal status. The evidence suggests that the prestige hierarchy is essentially invariant with respect to sex and that the socioeconomic hierarchy is nearly so. The literature exploring the process of occupational attainment using these indices has, not surprisingly, found the processes to be essentially similar for males and females. For the exploration of sex stratification, the degree of femaleness of the occupation, the proportion female, is the important dimension of occupation. The question becomes, what characteristics of females are associated with aspiring to and taking more or less "female" jobs in the first decade after high school?

## Individual Versus Structural Explanations

To what extent do individual preferences or structural factors explain later labor force outcomes? For example, do women "prefer" female jobs over male jobs, or are there overt barriers such that they are allocated or directed into certain jobs instead of others? Researchers have conducted most work on occupational attainment using the individual perspective. The link between origin and attainment is sought in the socialization process, through the influences of other persons, especially parents, teachers, and peers, and through the institutions of the family and the school. However, there is another explanation of attainment. This theory emphasizes overt barriers to the attainment of certain groups:

> ". . . societal forces which identify, select, process, classify and assign individuals according to externally imposed criteria. Rather than differential attainment being seen as due to variations in learned motives and skills, as in a socialization model, an allocation model views attainment as due to the application of structural limitations and selection criteria." (Kerckhoff, 1976:369)

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1. That the sex-typing of occupations appears to be more important to the earnings of those least differentiated in terms of skills and education, suggests a structural barrier rather than a socialization explanation of occupational selection (see next section).

This perspective is also known as a structural or conflict perspective (Horan, 1978; Collins, 1971). Group membership has always been an important criterion for advantage in society in the past, whether it was social class, race, sex or ethnicity. In their review of the origins of vocational education, Bowles and Gintis (1976) argue that vocational programs were developed to provide the children of recent immigrants with appropriate training for workers in American society. It was assumed that they would not need the same academic instruction as would members of more privileged groups, and it was deemed desirable to separate the two groups in the school system. Thus, according to their reconstruction, ethnicity was a criterion for assignment to curriculum in high school in the past much as class, IQ and sex may be today. In the recent past race has been a clear barrier to employment in certain fields and a certain limit on earnings and advancement in others. Since the stability of any social system depends on its success in socializing its members so as to accept the legitimacy of its selection criteria (Bowles and Gintis, 1976), it is difficult to separate the socialization and structural perspectives in fact. Individuals learn to accept societal criteria as legitimate. These two approaches do imply different emphases for research, however.

The socialization perspective leads researchers to hypothesize individual explanations for differences in educational attainment, occupational choice, and earnings. Emphasis is placed on family background, ability, and cognitive skills in explaining differences in achievement. In contrast, the structural barriers perspective leads researchers to focus on criteria that identify individuals as a distinct group, on differences in achievement associated with group membership, and on barriers to societally defined success that exist for members of that particular group. In addition, the latter perspective leads researchers to search for the part played by differences in expectations and motivation rather than differences in ability and cognitive skills as critical for societal success. Finally, it leads researchers to hypothesize the causes of motivational differences as perceived opportunities and overt and covert barriers rather than as individual proclivities. One problem in using the structural perspective is that if barriers have been strong enough, there may be little variation within the group at question. If so, it would be difficult to test whether, in fact, individuals in one group would be similar to those in advantaged groups if, in fact, the barriers were demolished. Since barriers to women's opportunities have not been insurmountable in the past (women have been able to attain substantial success), we can estimate the responsiveness of women to increased opportunities. That is, within each race-sex group there will be some individuals with sex-typical and some with sex-atypical occupations, and some with high and some with low earnings. The questions we are interested in answering include the following: What factors are responsible for these variations within race-sex groups? Do the same factors affect men and women differently? Finally, how important is motivation versus skills/ability in the later success of men and women?

## The Process of Occupational and Wage Attainment

In order to answer these questions, we need to have a model of

the process by which family background, ability, and schooling affect later occupation and earnings. For example, does parental background act only through schools, or does it directly affect later wages? Does high school curriculum directly affect later wages or does it act through work experience, training, and occupation?

In Figure 1 we have diagrammed a model of the factors and events affecting the later attainments and socio-economic well-being of non-college youth. In this model all early events affect all later events, but no later event or variable affects earlier events or variables in the chain. The most important outcomes of this process are hourly wages of individuals at their current or last job and the sex-typicality of an occupation in which the individual is employed (or was last employed). Other outcomes which affect the well-being of individuals are considered: employment status, annual hours worked and unemployment experience.[1] The sex-typicality of an occupation has a strong impact on the wages of individuals in that occupation; jobs with fewer females (male sex-typical) are more highly paid than jobs with more females (female sex-typical). However, the sex-typicality of an occupation is <u>not</u> hypothesized to affect directly whether or not persons are employed, the hours they work, or their unemployment experience.

Training and work experience are factors determined in large measure by previous experiences, goals, regional characteristics, and background. The former, in turn, affect all later variables, such as the sex-typing of the job, employment status, annual hours worked, and unemployment experience.

Moving further to the left in Figure 1, we hypothesize that whether or not an individual graduates from high school affects the probability of obtaining training and also the amount of work experience obtained, as well as later variables.

One of the factors affecting whether an individual will graduate from high school is family status: whether married, whether has children, and the number of children. In the particular group we are studying, non-college students, family formation occurs very early, for many before the senior year in high school; decision-making regarding sex, marriage, and children occurs early in the chain. Of course, for many individuals marriage and children come after high school graduation. These individuals have simply made other decisions when faced with the same options. The position of family formation in the chain emphasizes the importance and priority of such decisions to all later events (see, for example, Hofferth and Moore, 1979).

Most events in the high school years occur prior to marrying and having a family. Such events and experiences include curriculum, whether

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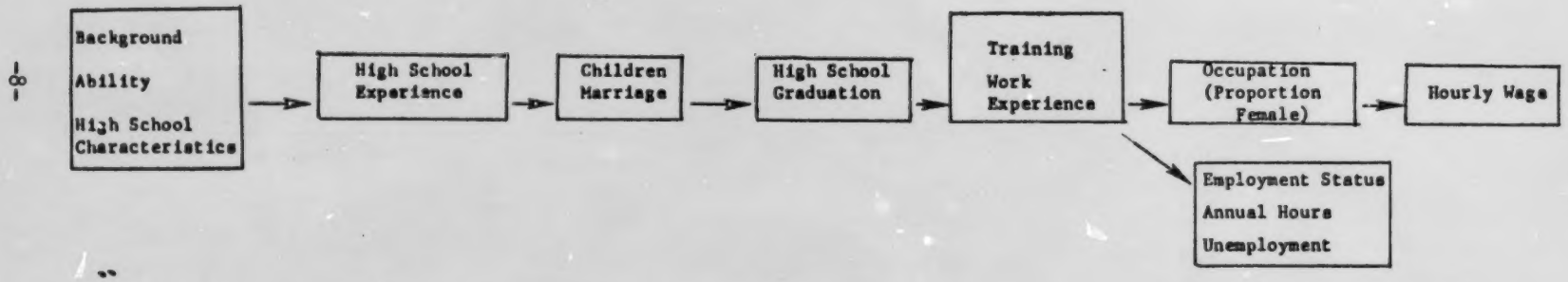
1. Although the hours individuals work annually may affect their wages, we have not included this possibility here (see Beller, 1980).

Figure 1: Model of the Attainments of Non-College Youth in the Decade After High School



worked in high school, hours spent in homework, hours spent in extracurricular activities, whether favorite extracurricular activity was sports, whether favorite subject was math, attitude toward the high school experience, teacher encouragement to continue on past high school, and number of friends with college plans.

Finally, characteristics of individuals (such as family background, parental education and occupations, number of brothers and sisters, encouragement to go on past high school, whether has a foreign-born parent, whether spoke a foreign language in the home when growing up, whether the family is intact), ability (IQ, knowledge of the world of work[1]), characteristics of the environment (southern residence, metropolitan residence, unemployment rate in the local labor market), and characteristics of school district in which the respondent lived and the school attended (expenditure per pupil, students per teacher, public versus private) constitute the context in which the process of growing up takes place.

## Differences Between the Sexes and Races in the Achievement Process

The little research that has been done indicates substantial similarity in the achievement process between men and women, with a few small differences. Alexander and Eckland (1974), for example, found parental influences to be relatively more important for young women than for young men, and ability and grades relatively less important. However, few studies have incorporated the relative impact of family formation on women and men. Marriage and children have important effects on the achievement of women (Hofferth and Moore, 1979; Card, 1977; Marini, 1978). Although early studies found little impact on men (Kerckhoff and Parrow, 1977), one recent study has found an early birth to be detrimental to the later occupational attainment of men as well (Card, 1977). Men and women who do not go on to college begin their families much earlier than those who do; thus we would expect family formation to have much stronger impacts on such young men and women. In addition, previous studies have not looked at the sex-typicality of the occupations held by young men and women; given the outcomes of the process, sex-typical occupations, we would expect that similar characteristics would result in completely opposite types of occupations for men and women.

Other research has examined race differences in the achievement process. The process of achievement seems to be fairly similar for both whites and blacks of the same sex (Porter, 1974; Portes and Wilson, 1976).

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1. Proportion of four occupations (statistical clerk, nurses' aid/hospital orderly, social worker, medical illustrator) respondent was able to correctly identify by the tasks associated with them. These tasks were selected from a larger set so that they would be identical for men and women; as a result, however, they are primarily "female" occupations -- from 67% female for social worker to 83% female for nurse's aid.

the difference lies mainly in the initial parental background of the two groups; the average socioeconomic level of white parents is much higher than that of black parents. When background is controlled, blacks benefit more than do whites from ability and schooling (Grasso and Shea, 1979).

High Schools and Occupational Choice

Although there is evidence indicating that sex differences develop in grade school and earlier, a number of studies point toward the high school and early college years as the most important in the sex-based differentiation in occupational goals (see, for example, Maccoby and Jacklin, 1974; Schwarzweller, 1976; Sem, 1971; Angrist, 1972; Rossi, 1965). Certainly this is the period in which aspirations develop into choices between tracks, into plans for college and into occupational directions.

Whether they are conservative or radical, theorists nevertheless agree that there are close ties between the educational system of a society and the structure of the broader social system (Griffin and Alexander, 1978). Schools not only provide skills, they select and socialize in a way that corresponds to the workings of the economic system, thus, in effect, reproducing it. Griffin and Alexander (1978) ask why research has failed to document the actual impact of school organization upon students. These authors suggest several reasons for their "failure to document the obvious." First, most studies have looked at only a limited set of school experiences -- for example, the effect of years of schooling. Many studies have included high school curriculum; often however, it is simply dichotomized as either college preparatory or not. Few have looked at other characteristics of school experiences. We have a set of variables that is much broader -- it includes high school curriculum (vocational, general, college preparatory and commercial), hours spent in homework, whether employed in high school, attitude toward high school, favorite subject, number of friends with college plans, favorite extracurricular activity, hours spent in extracurricular activities, and teacher encouragement to continue on past high school. Second, most studies have focused on a limited set of outcomes of schooling, educational attainment being the most common outcome. In our study, in contrast, we intend to look at the sex-typicality of the occupation in which the individual is employed and on earnings. In addition, radical critiques focus on the role of schooling in producing worker traits suited to various levels of the employment hierarchy. These include obedience, dependability, and internalization of norms. Such outcomes have not been widely studied. Although not covered in great detail, time spent on homework and whether liked the high school experience represent some of these "outcomes" of the school process and as such will be used to predict later labor force effects. Third, between-school effects have received substantially more attention than within-school effects. Several studies show that school characteristics do affect later earnings, but the effects are substantively small. Much more promising, however, is recent work that shows substantial effects of differences within schools, focusing especially on tracking (Rosenbaum, 1976). We will try to look at the impact of within-school differences such as being in different curricula controlling for some (but not all) differences between schools. Fourth, there has

been little reseach on the differential effects of schools on men and women. Given the substantial difference in labor market outcomes -- occupations and wages -- high school experience either has different effects or men's and women's experiences differ. There has been somewhat more research on race differences; however, there is little that treats both race and sex simultaneously as we have done here. Fifth, and finally, most studies assume that schools have the same impact on later labor force outcomes at all levels of educational attainment. This may not necessarily be the case.

## Differences between College- and Non-College-Bound Youth

Most previous studies of the impact of schools on achievement have assumed similar effects across all levels of educational attainment. However, we hypothesized that this is not the case. From either a human capital or a dual labor market perspective we would expect specific high school experiences to be more salient for high school drop-outs or terminal high school graduates than for those continuing their schooling (Griffin and Alexander, 1978). From the human capital perspective, we would expect the most recent formal schooling to be salient to later achievement and from the second approach we would certainly expect the job-related skills acquired in high school to be relevant to economc success because they are suited to the kinds of work these non-college youth are most likely to pursue. In addition, Bowles and Gintis (1976) argue that the work-related personality traits required of employees differ according to the work role in question, those at the base requiring a heavy emphasis on obedience and rules and those at the top requiring a greater ability to make decisions. This pattern is closely replicated in the social relations of schooling, for example, the wide range of choice over curriculum, life style and allocation of time afforded to college students, compared with the obedience and respect for authority expected in high school (Bowles and Gintis, 1976:730).

If such differences do exist, traditional measures of the effect of schools on achievement may underestimate it by diluting smaller effects for college-goers with much larger effects for high school graduates and drop-outs. Of course, the most important effect of high schools may be in directing some students on to college, an effect that will not show up in a sample of only the non-college bound.

# Methodology

## Description of the Data

The National Longitudinal Surveys (the "Parnes" data), which were designed by the Center for Human Resource Research at Ohio State University and conducted by the U.S. Bureau of the Census, consist of a national sample of 5,159 women who were 14 to 24 in 1968 and a national sample of 5,225 men who were 14 to 24 in 1966, the initial years of the surveys. Interviews

were conducted annually through 1973 with the young women, in 1975 and 1977 by telephone, and by personal interview in 1978 to complete the ten years of the study. The young men were followed up annually through 1971; telephone interviews were conducted in 1973 and 1975, followed by a personal interview in 1976. Sample retention has been very high, with 82 percent of the young women and 76 percent of the young men still remaining in the survey after the 1975 interview. Data for this study were available through the 1975 interviews for the young women and through the 1975 interviews for the young men.

The young men's birth cohorts range from 1942 through 1952, including both World War II births and post-World War II baby-boom births. The young women's birthdates range from 1944 through 1954, covering primarily the post-war period. The oldest of these youth graduated from high school in 1970 (men) and 1972 (women). Thus, besides age variation, within these samples there is substantial variation in birth cohort and historical period, although the data most fully represent the children of the baby boom.

For our analyses we selected a subsample of youth who had completed no more than 12 years of formal schooling, that is, no college, by the last year the survey was conducted. For the majority of the sample, this point occurred at least five years after leaving high school. That a small proportion will eventually complete more schooling is not likely to bias our results. Data summarizing the amount of schooling completed at age 21 and 23 by the Parnes youth who were enrolled in school in the first year of the survey, by curriculum in high school, race,and sex, are presented in Table 1. The sample we have selected excludes those who completed more than 12 years of schooling. Only a small proportion who have not completed high school by age 21 do so between 21 and 23.

Because of the special nature of the sample, we considered drawing a control group of youth that included college attenders. However, it was decided that the advantages of an in-depth study of non-college students would out-weigh the disadvantage of not having a comparison group, especially since most previous research includes or focuses on the college group. Instead, to enable the reader to compare the basic characteristics of our sample with those of others, basic information from youth of similar birth cohorts has been obtained from several other studies. This information is presented in the text along with the results of our sample. The data sets available on similar cohorts of youth, and their time coverage, are compared with the Parnes data in Figure 2.

## Analytic Strategy

Enormous changes in the lives of youth occur during the high school and early post-high school years. To capture these changes we have defined five time points with reference to respondents' grade in school, or, if out of school, with reference to the year in which they would have been in grade 12 if they had graduated with their high school class. The lives of young men and women will be captured in our analyses at the

Table 1: Schooling Completed at Ages 21 and 23 by High School Curriculum, Race and Sex, Respondents Enrolled in School in 1966/68, Including Those Who Go On To College

White Females

| High School Curriculum | Age 21 Highest Grade Completed <12 | | 12 | | >12 | | Total | | Age 23 Highest Grade Completed <12 | | 12 | | >12 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vocational | 0% | (0) | 81% | (26) | 19% | (6) | 4% | (32) | 0% | (0) | 88% | (15) | 12% | (2) | 4% | (17) |
| Commercial | 4 | (7) | 81 | (134) | 15 | (24) | 19 | (165) | 3 | (3) | 81 | (83) | 16 | (16) | 21 | (102) |
| College | 1 | (3) | 31 | (104) | 69 | (233) | 39 | (340) | 1 | (2) | 23 | (47) | 76 | (152) | 41 | (201) |
| General | 5 | (15) | 67 | (224) | 29 | (98) | 39 | (337) | 0.6 | (1) | 73 | (125) | 26 | (45) | 35 | (171) |
| Total | 3 | (25) | 56 | (488) | 41 | (361) | 100 | (874) | 1 | (6) | 55 | (270) | 44 | (215) | 100 | (491) |

Black Females

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vocational | 23 | (3) | 77 | (10) | 0 | (0) | 4 | (13) | 37 | (3) | 63 | (5) | 0 | (0) | 4 | (8) |
| Commercial | 7 | (4) | 80 | (45) | 11 | (7) | 17 | (56) | 0 | (0) | 87 | (33) | 13 | (5) | 18 | (38) |
| College | 7 | (5) | 47 | (35) | 46 | (34) | 22 | (74) | 4 | (2) | 41 | (19) | 55 | (25) | 21 | (46) |
| General | 11 | (21) | 72 | (140) | 17 | (33) | 58 | (194) | 7 | (9) | 68 | (84) | 24 | (30) | 57 | (123) |
| Total | 10 | (33) | 68 | (230) | 22 | (74) | 100 | (337) | 6 | (14) | 66 | (141) | 28 | (60) | 100 | (215) |

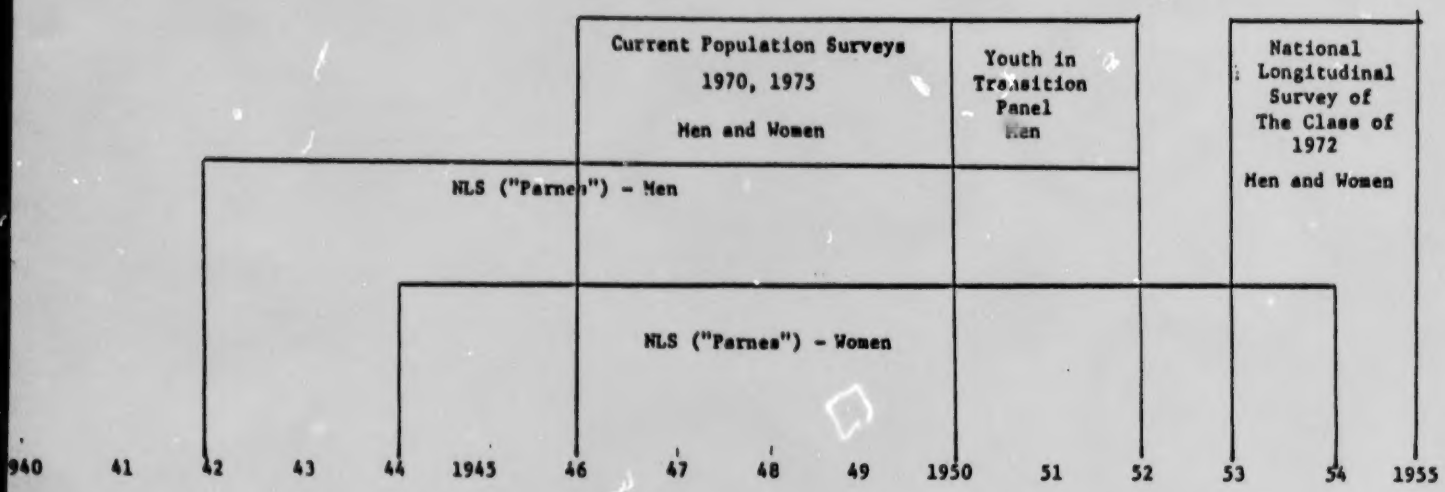
White Males

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vocational | 7 | (8) | 70 | (76) | 22 | (24) | 11 | (108) | 6 | (7) | 77 | (92) | 17 | (21) | 12 | (120) |
| Commercial | 0 | (0) | 75 | (27) | 25 | (9) | 4 | (36) | 0 | (0) | 70 | (28) | 30 | (12) | 4 | (40) |
| College | 1 | (4) | 21 | (92) | 78 | (353) | 45 | (449) | 0.7 | (3) | 20 | (83) | 79 | (322) | 42 | (408) |
| General | 4 | (14) | 59 | (236) | 36 | (150) | 40 | (400) | 3 | (12) | 59 | (239) | 38 | (155) | 42 | (406) |
| Total | 2 | (26) | 43 | (431) | 55 | (536) | 100 | (993) | 2 | (22) | 45 | (442) | 52 | (510) | 100 | (974) |

Black Males

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vocational | 17 | (7) | 66 | (27) | 17 | (7) | 14 | (41) | 17 | (7) | 67 | (28) | 17 | (7) | 15 | (42) |
| Commercial | 12 | (2) | 47 | (8) | 41 | (7) | 6 | (17) | 20 | (3) | 53 | (8) | 27 | (4) | 5 | (15) |
| College | 1 | (1) | 36 | (28) | 63 | (49) | 26 | (78) | 1 | (1) | 35 | (26) | 61 | (46) | 26 | (74) |
| General | 6 | (10) | 66 | (110) | 28 | (53) | 55 | (167) | 8 | (12) | 68 | (106) | 24 | (38) | 54 | (156) |
| Total | 7 | (20) | 57 | (173) | 36 | (110) | 100 | (303) | 8 | (23) | 59 | (168) | 33 | (95) | 100 | (287) |

Figure 2 : Birth Cohorts Covered by the NLS ("Parnes") and by Comparable Surveys of Young Men and Women



following points: grade 9, grade 12, and at ages 21, 23, and 27, approximately three, five, and ten years after high school, respectively.[1, 2] However, we are interested not only in looking at respondents at these points in time, but also in examining changes between points in time, such as occur between grades 9 and 12 or between three and five years after high school.

The structure of our analysis is restricted by two basic facts. First, since our sample covers a ten year range of ages, not all individuals can be captured at each point in time. In year one of the survey, the older respondents have already left school, while by the last year of the survey the younger ones have been out of school for only a few years. Second, in constructing the survey instrument, not all questions were asked of all individuals, some for obvious reasons. For example, those in grades 7, 8, and 9 in the first year were not asked for information about their high school experience, since none had completed a year of high school. Characteristics of schools were obtained for those in grade 9, but not for those in grades 7 and 8. Educational aspirations were not asked of those already out of school in the first year of the survey.
One advantage of studying only non-college students is that complete information on high school experience is available only for those who subsequently completed no college.

Because of the nature of the data and the questions we wanted to ask, we created three separate samples: youth in grades 7 through 9 in 1966/68; youth in grades 9 through 12 in 1966/68; and youth out of school in 1966/68. Information on 9th graders and on the changes between grades 9 and 12 were obtained from sample 1; from sample 2 we obtained information on youth in grade 12, and on changes between grade 12 and the first three years after high school; from sample 3 we obtained our information on youth three, five and ten years after high school. A detailed outline of the samples, including number of cases, by race and sex, appears in the Appendix.

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1. This approach is based upon the concept of grade cohort in grades 9 and 12, and age cohort after leaving school, making the data comparable to studies such as the National Longitudinal Survey of the High School Class of 1972, which interviewed a grade cohort. In our approach, data from a 16 year old student who drops out of school in the 11th grade, for example, would be gathered from the drop-out at the same time as from his classmates who did graduate, even though the former will have been out of school longer. However, since some students will, in age, actually be behind their grade level (and some ahead), grade and age cohorts are not exactly comparable. For example, not all those age 21 will have been out of school exactly three years; some will have been out more, some fewer years. However, for these youth, ages 21, 23, and 27 roughly approximate the third, fifth, and tenth years after high school.

2. These time points are generally referred to here as grade 9, grade 12, three, five, and ten years after high school.

In the Parnes Surveys, blacks were oversampled, facilitating separate analyses by race. To correct for the oversampling of blacks, when whites and blacks are analyzed together, weights calculated by researchers at Ohio States must be used. However, since we have conducted all analyses separately by race, all analyses in this report are unweighted. All N's represent the true number of cases on which the analysis was conducted (see Appendix for further discussion). The reader is warned, however, that while the results are (separately) representative of the population of whites and the population of blacks, male and female, in no cases should the unweighted numbers of whites and blacks be added to obtain population estimates.

Problems: Changes Since 1966-68

The advantage of using longitudinal data is that information is available to us on the same individuals over a fairly long period of time. Thus we can test whether events which occurred years earlier affect their current situation, without the problems of recall. The disadvantage of course, is that changes occur between the time we first interview our respondents and when we analyze the data. Younger cohorts may grow up in such a different climate that the older cohorts may no longer be representative of youth. To evaluate the extent to which this presents a problem we need to first look at the types of changes that have occurred and second how they might affect our study's conclusions.

Specific changes relevant to this study are those that affected the types of occupations in which women were employed, their aspirations and their wages. The Equal Pay Act (1963) and Title VII of the Civil Rights Act (1964) were passed prior to the first interview year (1966/68). Since then two additional pieces of legislation that affected women were passed: the Equal Employment Opportunity Act of 1972, amending Title VII of the Civil Rights Act of 1964, and Executive Order 11246, the federal contract compliance program. The former prohibits discrimination by private employers of 15 or more employees by state and local governments and educational institutions (Beller, 1980). The latter prohibits discrimination by employers holding federal contracts. Beller (1980) finds some evidence that enforcement of these two laws did in fact reduce occupational segregation somewhat between 1967 and 1974, the first by 6 percent, the second by 2 percent. This, in turn should have some impact on the way young women view occupations.

A second set of relevant laws passed during the period include Title IX of the Educational Amendments (1972) and its implementing regulations (1975). One study found no impact of Title IX at all between 1972 and 1975, when the regulations were finally issued (PEER, 1977, 1978). Since then, there is some evidence of an increase in the participation of women in traditional male vocational programs. Although the proportion participating has doubled, the total proportion is still small, between 2 and 20 percent of enrollments, depending on the state (PEER, 1979). Other changes mandated by Title IX include equality of expenditures on high school and college athletics, that is, spending proportional to the relative participation by men and women. There is evidence that participation of women in school athletics has in-

creased as a result, both in high school and in college (PEER, 1979). With increased availability of athletic scholarships for women, athletics has become an avenue to college that it was only for men in the past. Thus we might expect substantial change in the relationship between participation in sports and later achievements between youth interviewed in the National Longitudinal Surveys and current cohorts.

Unfortunately, the evidence does not indicate substantial changes in aspirations of youth for sex-typical employment. Studies of young children indicate that they are increasingly likely to say that women can do jobs considered male jobs; however, they continue to prefer traditionally sex-typical employment for themselves. At the high school level one study (Garrison, 1979) found that female aspirations for high status professional occupations rose, while male aspirations declined somewhat between 1970 and 1976, although still twice as many males as females aspired to these occupations. A declining percentage of females chose clerical, sales or middle status professional jobs, but there was almost no change in the proportion of males and females aspiring to skilled manual jobs, the category of occupations in which the differential was largest. We compared data on the employment one year after school of 1972 and 1975 high school graduates and found little change in the distribution of occupations among males and females.

However, there is some evidence of a slight overall reduction of occupational segregation between 1960 and 1970 (Blau and Hendricks, 1979), and between 1972 and 1978 (O'Neill, 1980). Women and men were less likely in 1978 than in 1972 to be in sex-typed occupations and more likely to be in integrated occupations. Of the change in women's employment between 1972 and 1978, 46 percent took place in integrated occupations, 15 percent in traditionally male occupations and 39 percent in traditionally female occupations (O'Neill, 1980).

Even though more women overall may select male occupations, there is no evidence that the factors associated with a young woman choosing a male-typed occupation have changed over time. Since we intend to analyze the labor market effects of high school experiences separately by race and sex, the results should, in general, not be outdated, with the exception of the effect of sports, which may no longer hold true. Finally, we can glean some evidence of cohort change from our results. Youth were divided into two separate cohorts, younger and older in the first year of the survey, roughly corresponding to the five year periods 1950-54 and 1945-49, respectively. When included in the equations, this variable indicates whether, in fact, there are differences between the two cohorts included in the survey, and from these differences we can infer some of the trends that may continue in more recent cohorts. In any case, findings that may differ among more recent cohorts of youth will be pointed out. We feel that the advantages of having longitudinal data on youth greatly outweigh the obvious yet probably slight problems of generalizing to today's youth from data on earlier birth cohorts.

## Characteristics of Non-College Youth

What proportion of all youth do not later attend college? The proportion of all youth in our sample who go on to college depends on race and sex. By five years after high school, 56 percent of white women, 72 percent of black women, 47 percent of white men and 67 percent of black men had completed no college (twelve years of schooling or less) (see Table 1). That is, non-college youth constitute roughly half of all youth. Some of these will eventually complete some college, although the proportions are probably not large. What are the young non-college youth in the National Longitudinal Surveys like? How do those who do not later attend college compare with those who do?

### Demographic Characteristics

The average age of the 12th graders in our sample was 17. Over half were living in urban areas. About one-third of the whites but over two-thirds of the blacks were living in the south. The average family incomes of 12th graders differ substantially by race. The family incomes of white youth average about $14,000, compared with $7,000 for blacks. The differences in demographic characteristics between those 12th graders who later do and who do not go on to college are small. The family incomes of white 12th graders who later attend college average about $16,000 - $18,000. There is only a small difference in the average incomes of black 12th graders who do and do not attend college, a difference which is slightly larger for men than for women. In general, family incomes of 12th graders consist primarily of parental income. However, a rather surprising proportion of non-college men and women are married when they are or should be in their senior year: 15 percent of white women, 12 percent of black women, three percent of white men, four percent of black men. More startling are the figures on parenthood. Twenty-two percent of black women have had children by the time they are high school seniors, compared with seven percent of white women, two percent of black men and one percent of white men.[1] Only a slightly smaller proportion of all men and women, including those college-bound, are married in their senior year -- 12, 11, two and four percent, or have children -- five, 19, one and two percent of white women, black women, white men and black men, respectively.

### Schooling and Job Training

Ninety percent of white men and women, 80 percent of black men and women are enrolled in school when they should be in grade 12. A small proportion of those enrolled in school were behind a grade: five to seven

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1. Data for women include those ever having children; for men, only children living with them are included. Since males are less likely to have their own children living with them than females, estimates for men are low.

percent of whites, 10 to 17 percent of blacks, with little difference between the sexes. Of those who were enrolled in school, half are in a general curriculum, one-quarter in a college preparatory curriculum, and the rest in a vocational or commercial curriculum. Blacks are more likely to be in a general curriculum (60 percent) than whites (46 percent), and less likely to be in a college preparatory curriculum (17 versus 25 percent respectively), with little male-female difference. Females are more likely to be in a commercial curriculum (26 and 17 percent) than males (five percent). Males are more likely to be in a vocational curriculum (18 percent) than females (five percent), with little race difference. White females are much more likely to be in a commercial curriculum than black females (26 versus 17 percent). In comparison, of all students, including those who later go on to college, a smaller proportion are in a general curriculum and a larger proportion are in a college curriculum (see Table 1). Those who attend college are much more likely to have been in a college preparatory curriculum in high school.

Employment and Unemployment

A substantial proportion of teenagers are employed when they should be in their senior year in high school: 24 percent of black women, 40 percent of white women, 49 percent of black men, 60 percent of white men. Another 8, 15, 11, and 16 percent are unemployed, looking for work. There are no differences among women who do and who do not later attend college. Among men, a slightly small proportion of all youth, including those who attend college, are employed in their senior year in high school (57 and 48 percent).

Among non-college men and women who are employed in 12th grade, hourly wages are low. White and black men make similar wages: $2.42 and $2.45 per hour, respectively.[1] White women make $1.43 and black women $1.16 per hour. Non-college white females have experienced the least unemployment -- two weeks last year. Black males have been unemployed longer than white males or black females -- four weeks. Young women who work work 16 to 20 hours per week, while young men work 25 to 30 hours per week, on the average, when they are or should be in grade 12. Even though they are less likely to be employed, young black women who work work more hours per week than young white women, and young black men work more hours than young white men. No comparable information was available for those who later attend college.

The occupations in which young men and women are employed in grade 12 are highly sex typical. Seventy-four percent of young white and black women are employed in female-typical occupations, while 62 percent of

1. 1974 dollars for women; 1975 dollars for men.

white and black men are employed in male-typical occupations.[1] A smaller proportion of white than black women are employed in male occupations, a larger proportion in integrated occupations in grade 12. A slightly larger proportion of black males than white males are in integrated occupations, a smaller proportion in female occupations. The average proportion female in the occupations held by white females in grade 12 was 73, black females 71, white males 24 and black males 22. The occupations of all youth, including college-goers, are as highly sex-typed as those of non-college-goers.

Attitudes and Aspirations

As might be expected, there is a substantial difference in aspirations between young men and women who do later attend college and those who do not. Of all 12th graders, including those who later attend college, 67 percent of white women, 68 percent of black women, 73 percent of white men and 65 percent of black men planned to continue past high school. When we exclude college-goers, 50 percent of white women, 58 percent of black women, 55 percent of black men and 56 percent of black men in grade 12 planned to continue after high school. It is clear that the aspirations of youth for later schooling are high. Of the non-college youth in 12th grade, most would like to obtain one and one-half to two years of college. The goals of black women and men are highest, those of white women lowest. Young non-college women rated their parents and teachers slightly more encouraging in furthering their schooling than did men, but the differences are small. About half of all respondents reported that their parents wanted them to go to college, and most reported two friends that were attending college.

Black and white 12th grade females expect to be in occupations at age 35 as highly female-typed as those they are currently in. In contrast, males of this age are in jobs with a higher proportion of women than the jobs they expect to be in at age 30. Black and white males expect to be in highly male-typical occupations when they are 30. Race differences by sex are very small. There is no difference in sex-typicality of occupational aspirations between college- and non-college-goers.

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1. Occupations are defined in this study by the proportion of women in them in 1970. In that year 38 percent of the labor force was female. Occupations in which few women are employed (less than 23 percent) we refer to as "male sex-typical occupations"; those in which many women are employed (more than 53 percent) we refer to as "female sex-typical occupations". Those with between 23 and 53 percent female we refer to as "mixed or integrated occupations". If men and women were equally distributed in all occupations, almost half of all women would be employed in mixed occupations as we have defined them; the remaining half would be distributed equaly in male and female jobs. In fact, two-thirds of all women are in female sex-typed occupations.

In spite of their lower hourly wages, white and black women who are working when they should be in grade 12 are happier with their jobs than men: half report themselves to be very satisfied. Black men are least happy with their jobs: 30 percent report that they are very satisfied. Thirty-six percent of white men report they are very satisfied. There is no difference in job satisfaction between the non-college-goer and the college-goer.

## School Experience and School Characteristics

Most respondents attended public high schools. More white women and men than black men and women attended private schools: six percent of white women, four percent of white men, three percent of black women, one percent of black men. Per pupil expenditures vary somewhat by sex, with men in schools with higher per pupil dollar expenditures. Average annual expenditures range from $800 to almost $1,000 per pupil. There were an average of 20 to 22 students per teacher in these schools, with whites in schools with slightly fewer students per teacher than blacks.

A substantial proportion of youth liked their high school experience a lot. Surprisingly, more black than white youth responded this way: 60 percent of black women, 56 percent of black men, 47 percent of white women, 49 percent of white men. On the average, women spent more hours on homework than men: seven hour per week compared with five hours per week. On the other hand, young women spent less of their time in extracurricular activities in high school: two or three hours per week compared with the six or seven hours per week that men spent. Twice as many young men as women mentioned sports as their favorite extracurricular activity: two-thirds of men, one-third of women. A small proportion reported that working for pay was their main non-school related activity during their last year, more of men than women. Finally, young women were much less likely than were men to say that their favorite high school subject was math: nine percent of women compared with 19 percent of men, with no difference by race. However, one-quarter to one-third of both sexes were likely to say that math was the subject liked least, with small race differences.

White men and women have a substantial advantage over black women and men in measures of ability, with a 15 point differential favoring whites and little sex difference. There is no significant difference in the abilities of men who later attend college and those who do not. There is no measure of grades.

## Outline of the Report

Our task here is to describe the part played by high school experiences in the early socio-economic achievement process of young men and women, black and white. Equity is of central concern. We are particularly interested in factors prior to labor force entry that lead to the occupational segregation of young men and women and to their differential earnings ten years after high school. We have focused on young non-college

men and women for the reasons described earlier; however, our results are compared with previously published data on all youth. In this way we can see how different, in fact, non-college youth are from all youth and how the achievement process differs, if indeed it does.

In this chapter we have discussed the rationale for the study, the questions we would like to address, and the data and methodology used. We have also gotten a picture of what our non-college sample of youth is like in 12th grade. We begin tracing the achievement process in Chapter 2 by looking at the educational and occupational aspirations and curriculum selection of our non-college youth in high school. In the next three chapters we will follow them through the first decade after high school, attempting to link events and experiences prior to leaving school, including parental background and school experiences, with later labor force outcomes, controlling for post high school experiences and contingencies, for individual characteristics such as ability, and for contextual variables such as characteristics of the school district and the local labor market. In Chapter 3 we look at family formation, schooling and job training. In Chapter 4 we examine labor force participation: work experience, hours of work, employment and unemployment. In Chapter 5 we discuss the occupations and wages of non-college youth, looking both at sex and race differences in outcomes and in the achievement process. Finally, in Chapter 6 we summarize the results and present our conclusions.

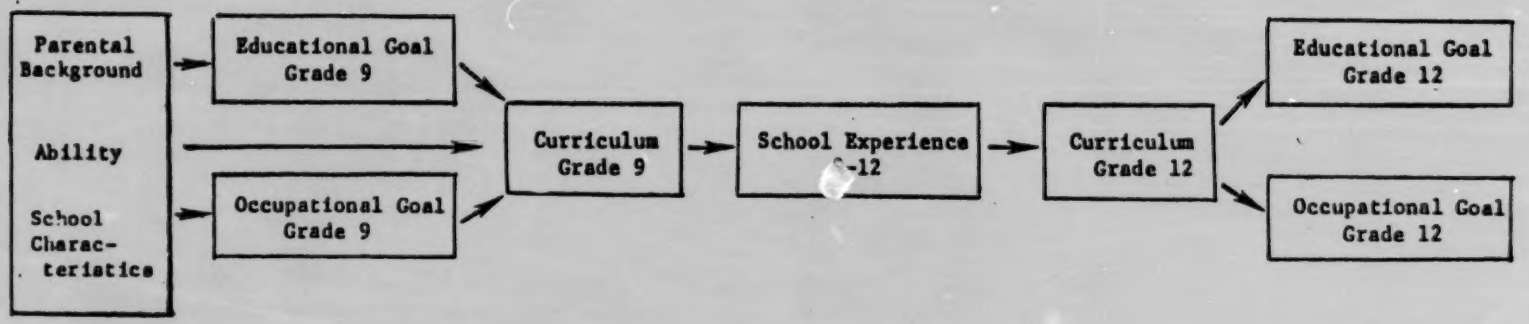
## CHAPTER 2: EDUCATIONAL AND OCCUPATIONAL ASPIRATIONS AND CURRICULUM SELECTION

In this chapter we set the stage for later chapters. We focus on two basic issues: the criteria for curriculum selection and the early consequences of this selection. What evidence can we find to shed light on the relative importance of the socialization versus the allocation hypotheses developed to explain curriculum assignment? Do individual preferences, knowledge of alternatives, ability, and early educational and occupational aspirations determine curriculum or do race, sex, and family social status determine it? Given selection into a particular curriculum, how does curriculum affect later goals and aspirations? Net of the initial level of aspirations, does a particular curriculum effect changes in goals and aspirations? (In later chapters we will discuss the relationship of high school curriculum and aspirations to labor force attainments.) Finally, we will explore differences by race and sex in the factors associated with curriculum selection and in the effects of curriculum selection on the aspirations of non-college youth; where possible, results will be compared with those for all youth.

### Model of Educational and Occupational Aspirations and Curriculum Choice

To help describe the causes and consequences of curriculum selection at the high school level we have diagrammed the process through which students arrive at the aspirations for education and employment that they hold in twelfth grade (Figure 3). Early educational and occupational goals, as measured in ninth grade, depend on factors that occurred prior to that point, such as ability, school characteristics, and family environment. They are also a complicated product of unmeasured past experiences. Early goals (plus family background, school characteristics, ability, race and sex) are instrumental in selecting ninth grade high school curriculum. However, students do not remain in the same curriculum throughout high school, nor do their educational and occupational goals remain the same. Their experiences in grades 9 through 11 may cause them to alter both their high school curriculum and their goals. In Figure 3 the arrow leading from ninth grade curriculum to twelfth grade curriculum passes first through school experiences. Twelfth grade educational and occupational goals form as the result of background, ability and school characteristics, early goals, high school curriculum and school experiences. Although ninth grade goals predate curriculum selection, twelfth grade goals develop from early goals plus later experiences and actual curriculum selected. Researchers have found, for example, that the variation in abilities of students in college preparatory curricula increases during the high school years, while the variations in the abilities of those in other curricula declines as a result of quite different socializing experiences in these different tracks (Rosenbaum, 1976). School experiences associated with different curricula act as (unmeasured) intervening variables in our model.

Figure 3: Model of the Educational Goals, Occupational Aspirations, and Curriculum Choice of High School Students



In this chapter we first discuss the educational and occupational aspirations of non-college youth, focusing on what leads to higher or lower educational aspirations and to expecting to work in more or less sex-typical occupations. We then discuss the curriculum distribution of black and white non-college men and women and why they choose the curricula they do in grades nine and twelve. We then look at change in high school curriculum between grades 9 and 12, and what factors lead to change. Finally, we explore the effect of twelfth grade curriculum on the educational and occupational goals of twelfth graders, changes in educational and occupational aspirations over the high school years, and causes of those changes.

## Educational and Occupational Goals

About half the young non-college youth enrolled in high school in the National Longitudinal Surveys said that they wanted to continue on past high school:[1] 50 percent of white females, 58 percent of black females, 55 percent of white males, 56 percent of black males. These goals are high, since we know that none of these youth did eventually attend college. In contrast almost two-thirds of all youth aspired to some college: 67 percent of white women, 68 percent of black women, 73 percent of white men, and 65 percent of black men. Non-college youth wanted one to two years of college on the average. Black men and women had the highest educational goals, white women the lowest, although the differences are small.

Occupational expectations were measured as the proportion female in the occupation in which the respondent expected to be employed at age 30 (for young men) or age 35 (young women). As expected, the difference between men and women was large. In grade nine white and black women expected to be employed in occupations 70 to 78 percent females, respectively, white and black men in occupations 11 to 17 percent females, on the average. Put in another way, 76 percent of white ninth grade women and 83 percent of black women expected to be in "female" jobs (54-100 percent female), while 82 percent of white men and 72 percent of black men expected to be in "male" jobs (0-23 percent female) when in their 30s. The race difference was much smaller, but interesting nevertheless. Black women aspired to much more sex stereotyped jobs than did white women, while black men aspired to much less sex stereotyped jobs than did white men. That is, black women and black men aspired to jobs with a higher proportion female than did white women and white men.

The differences between college-bound and non-college-bound youth are small. When we look at all youth enrolled in ninth grade, including those who later attend college, we find 76 percent of white women and 83 percent of black women in female jobs, 79 percent of white men and 68 percent of black men in typically male jobs. There

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1. The question, asked of everyone enrolled in school was the following: "How much more education would you like to get?" This was then subsequently coded as total years of schooling desired, ranging from eight to 18.

is no difference between the college and non-college women. A slightly larger proportion of non-college men expect to be employed in typically male jobs than all men, college and non-college. This seems reasonable, as there is a larger amount of variation in the jobs held by men than women. For men, jobs with lower educational requirements are heavily male dominated, (e.g., craft occupations) while jobs with higher educational requirements are less male dominated. For women, in contrast, there is less difference in proportion female between jobs with higher and lower educational requirements (e.g., secretary and nurse) or the difference is in the opposite direction with the more female dominated job requiring more education.

## Factors Associated with Educational Aspirations

Substantial research has explored the correlates of educational aspirations. Family background characteristics such as parental education and father's occupation (Sewell and Shah, 1968; Alwin and Otto, 1977; Hout and Morgan, 1975; Kerckhoff and Huff, 1974; Otto, 1976, 1977, 1978), school characteristics such as school quality (Alwin and Otto, 1977; Hout and Morgan, 1975), and ability (Sewell and Shah, 1968; Alwin and Otto, 1977; Hout and Morgan, 1975; Kerckhoff and Huff, 1974; Otto, 1976, 1977, 1978) affect the aspirations and plans of twelfth graders. Factors in the high school experience of young men and women associated with higher educational aspirations include being in a college preparatory curriculum (Alwin and Otto, 1977), participating in extracurricular activities such as the performing arts (boys) (Otto, 1977) or sports (Otto and Alwin, 1977; Hanks, 1979), good grades (Hout and Morgan, 1975; Otto, 1976), and having friends with college plans (Alwin and Otto, 1977; Hout and Morgan, 1975; Otto, 1978). Encouragement from parents to continue past high school (Sewell and Shah, 1968; Alwin and Otto, 1977; Hout and Morgan, 1975; Kerckhoff and Huff, 1974) and significant others' influence (Otto, 1977; Picou, 1978) also determine educational aspirations.

Our results confirm the importance of parental background and family influences on the educational goals of ninth graders. Having parents who want their child to go on past college, receiving parent-teacher encouragement to continue past college, and having a father with a high level of schooling raise the educational goals of youth of both sexes and races. Although factors leading to high educational goals are, in general, similar for both races and sexes, one interesting sex difference appears. Having a mother or father in a sex-typed occupation lowers the educational goals of young black and white men, though it does not affect women's goals. This could mean that parents in highly sex-traditional occupations socialize their children in very traditional ways; however, since none of these youth later attended college it could also mean that such youth more realistically assess their opportunities than peers with parents in less sex-typical occupations. Only a few non-familial factors contribute to explaining the educational goals of ninth graders. As found in

other research, having friends in or planning to attend college raises educational goals. Being behind a grade lowers educational goals. Finally, living in an area with a high unemployment rate lowers the educational goals of young white men. This may reflect the nature of the labor force rather than indicate a causal association. We predict ninth grade educational goals modestly successfully, explaining between 20 and 35 percent of the variance, primarily through direct and indirect effects of family influence.

## Factors Associated with Sex-Typicality of Early (Pre-High School) Occupational Aspirations

Sex-typing is fairly well-learned and consistent at very young ages (Masters and Wilkinson, 1976; Papalia and Tennent, 1975; Scheresky, 1976; Hewitt, 1975; Tully et al, 1976). Although Maccoby and Jacklin (1974) found little parental differentiation in the socialization of boys and girls with respect to psychological and temperamental characteristics, they do present evidence of parental encouragement of sex-typed activities and behavior, ranging from choice of dolls and play activities to occupational aspirations. However, the part played by each parent may vary, depending on the sex of the child. Thornburg and Weeks (1975), for example, found mothers to be more traditional than fathers in vocational expectations for daughters and fathers more traditional than mothers in expectations for sons. Daughters of working mothers expected to work when adults (Almquist and Angrist, 1970). The type of occupation in which the mother is employed may also affect the expectations of the daughter. Besides parents, various studies have pointed to the part school teachers, toy manufacturers and salespersons, children's books, and the Sunday comics play in the development of traditional sex-role and sex-typed vocational aspirations (Bereaud, 1975; Bernstein, 1972; Brabant, 1976; Joffe, 1971; Kutner, 1976; Weitzman, 1972).

Thus we expect that the employment status of the mother, the occupations of both parents, the sex role attitudes of the parents and the sex of the offspring should affect the latter's sex role attitudes and choices. However, the social class of the family may also have an important influence. Working class parents and middle class parents differ in childrearing practices (Kohn, 1969). Lower class parents hold more traditional sex role attitudes, for example. Greater differentiation between girls and boys in the non-college group than in a comparable college group might be expected.

Our results only partially confirm the importance of family factors in explaining sex-typicality of occupational aspirations. For white men and women the sex stereotypicality of ninth grade occupational aspirations appears to be as strongly affected by experiential factors as by parental background.[1] White girls who did better in identifying

1. There were too few blacks for analysis.

tasks associated with four occupations ("Knowledge of the World of Work") had more sex-typical aspirations than those unable to identify those occupations. Being behind a grade was also associated with expecting to work in a highly sex-typical occupation. Family factors that were associated with young women being in a sex-typical occupation included having a mother who worked for pay, being in a broken family, and speaking a foreign language in the home while growing up. At that time a mother who worked for pay was probably in a sex-typical occupation. Being from a broken home and speaking a foreign language are probably associated with greater need for income and employment may be easier to find initially in female jobs. For white men, the more brothers and sisters, the more likely to aspire to an occupation in which more women are employed. Presumably, the more siblings, the more likely to have and be influenced by sisters. Finally, a high unemployment rate is associated with aspiring to a less heavily male job. Presumably, unemployment hits heavily male jobs first, e.g., craft jobs in construction. Parental education, income, and encouragement to continue past high school are not associated with the sex-typicality of the occupational aspirations of white ninth grade men and women. (They may be associated for black youth; however, the sample was too small for reliable results.) Thus we do appear to be capturing a different type of aspiration from that captured by educational goals.

## High School Curriculum

About one-third of all youth are enrolled in a college preparatory curriculum (Table 2). This curriculum provides academic course work as preparation for later college attendance. Roughly half of all youth are enrolled in a general curriculum. This curriculum provides general courses, including both academic and non-academic subjects, but provides neither a specific training program to facilitate getting a job nor a level of academic training high enough to facilitate a student entering college. Few students from a general track enter a four year college after high school (Table 1 and Rosenbaum, 1976). In this study we focus on the 13 to 20 percent in occupational curricula. The National Longitudinal Survey classifies occupational programs into two distinct categories, a commercial program, which is primarily secretarial and a vocational program which consists primarily of trade and industrial specialties such as carpentry, but also includes technical programs (e.g., electronics), agriculture, health, occupational home economics, and distributive education (marketing). These two occupational programs are highly sex segregated. In the National Longitudinal Surveys (Table 2) ten percent of men are enrolled in vocational programs, two percent of women. Three percent of men are enrolled in commercial programs, compared with 19 percent of women. Women in vocational programs are enrolled in clothing, commercial art and home economics, while men are enrolled in technical and trades programs. Within the commercial program, men are more likely to be in

Table 2: High School Curriculum of College and Non-College Youth in the National Longitudinal Surveys

| | | Men | | Women | |
|---|---|---|---|---|---|
| | | # | % | # | % |
| Vocational: | NEC[1] | 230 | 5 | 44 | 1 |
| : | Metal, Wood, Electrical, Mechanical, Other Building Trades | 236 | 5 | 0 | 0 |
| : | Clothing, Commercial Art, Distributive Education, Home Economics | 0 | 0 | 61 | 1 |
| Commercial: | Secretarial and NEC | 137 | 3 | 887 | 19 |
| College Preparatory | | 1627 | 36 | 1562 | 33 |
| General | | 2320 | 51 | 2170 | 46 |
| Total | | 4550 | 100 | 4724 | 100 |

[1]Not elsewhere classified

accounting, women in secretarial programs (see also Bureau of Occupation and Adult Education, 1978).

Non-college youth are more likely than all youth to be in a general curriculum and less likely to be in a college preparatory curriculum. Half of the twelfth graders in our non-college-bound sample are in a general curriculum, with one-quarter in a college preparatory curriculum and the rest in a vocational or commercial curriculum Blacks are more likely to be in a general curriculum (60 percent) than whites (46 percent) and less likely to be in a college preparatory curriculum (17 percent versus 25 percent, respectively), with little sex difference. Females are more likely to be in a commercial curriculum (26 percent and 17 percent for whites and blacks, respectively) than males (five percent). Males are more likely to be in a vocational curriculum (18 percent) than females (five percent), with little race difference. The proportions in each curriculum in grade 9 are similar.

What Factors are Related in Curriculum Choice in Grade 9?

Race is directly related to curriculum choice. Grasso and Shea (1979) found black men and women more likely to be in a general curriculum and less likely to be in a college preparatory curriculum than are white men and women. However, when background and ability were controlled, these differences disappeared. In fact, blacks of similar ability and background to whites were more likely to be enrolled in a college track. More blacks are in a general curriculum because they rank lower on the average than whites in measured ability and on family background characteristics (parental education, occupation, and income).

Sex also affects curriculum choice. Women are more likely to be in a commercial curriculum and less likely to be in a vocational curriculum than men (Grasso and Shea, 1979; Wiley and Harnischfeger, 1980). These differences do not disappear with controls for background and ability, since there is effectively no difference between men and women of the same race in background and ability. Thus sex remains an important factor associated with curriculum choice. The question then becomes, what types of men and women enroll in different curricula? Are the factors associated with enrollment in any given curriculum different by race and sex?

Family background has been shown to be the most important determinant of curriculum choice at the high school level (Wiley and Harnischfeger, 1980; Stromsdorfer, 1972; Grasso, 1976; Alexander et al., 1978; Rosenbaum, 1976). Alexander et al., (1978) also found that the socioeconomic characteristics of students influence curriculum enrollment in high school almost totally through their effects on achievements, goals, and encouragement from parents and peers during junior high school, net of ability and other controls.

Since family background is highly determinant of curriculum selection, and curriculum selection of later college attendance, by looking only at non-college youth we reduce the variance in socioeconomic background of parents, and thus its explanatory power. However, under these circumstances other types of familial influences might have somewhat larger effects than when the entire range of socioeconomic backgrounds is included. For example, besides their educational levels, the specific occupations of mothers and fathers may influence the curriculum choice of boys and girls. Most studies so far have examined and found a relationship between mother's employment and daughter's later vocational preference (see, for example, Almquist, 1974; Query and Kuruvilla, 1975; Burlin, 1976; Bacon and Lerner, 1975; Rey, 1974; Goodale and Hall, 1976; and others). Such effects should appear during the high school years, when vocational directions are forming.

Family background, though important, is certainly not the only factor affecting curriculum choice at the high school level. Ability, "IQ" has been found to affect curriculum selection (Grasso, 1976; Alexander et al., 1978). Measures of school quality such as the student-teacher ratio, expenditures per pupil, teacher salary, enrollment, and the length of the school year have been found to affect the early achievement and later educational attainment and earnings of young men (see, for example, Wachtel, 1975), though early studies were not so optimistic (see, for example, Jencks et al., 1972; Coleman, et al., 1966). The relationship of school and school district characteristics -- expenditures per pupil, student-teacher ratio, and whether public or private -- to high school curriculum selection will be explored.

The amount of information an individual may have about the world of work could be expected to affect curriculum selection, as it would that of occupation. Grasso (1976) was, however, unable to find any such relationship between occupational knowledge and choice of vocational curriculum among boys. On the contrary, he consistently found that the better informed scored higher on scholastic aptitude tests and were more likely to be in a college preparatory curriculum. Vocational students scored even lower than did general curriculum students. These results suggest that curriculum choice is not knowledge-based.

Is curriculum selection based on course likes and dislikes then? Grasso and Shea (1979) found students least likely to name an occupational course as the course most disliked, and occupational students were more likely than those in other curricula to name an occupational course as most liked. However, they also found that occupational students were least likely to say that they liked school very much and college preparatory students were most favorable about their high school experience (Grasso and Shea, 1979).

Finally, no school exists in a vacuum. The nature of the local labor market can be expected to exert an important influence on

the types of jobs counselors recommend to their students, as well as to the types of work their parents do (or don't do). A high unemployment rate, for example, might affect both the type of work chosen and the timing of labor force entry and exit. Whether the respondents live in a rural or an urban area, or in a southern or northern state may make a difference to their future plans, and probably to curriculum choice (see, for example, Duncan, Featherman and Duncan, 1972; Moore et al., 1977). Finally birth cohort might be important; more recent birth cohorts of women may have less traditional vocational preferences than earlier cohorts (see Grasso, 1976, and Moore et al., 1977, for example).

Our results confirm a number of these hypotheses. We will first discuss the factors associated with selection into a college preparatory curriculum in grade nine, followed by comparable results for the other curricula.

College Preparatory Curriculum. For both races and sexes educational and occupational goals affect enrollment in a college preparatory curriculum in grade nine. Youth with high educational goals enroll in a college preparatory curriculum in grade nine. Black women with sex-typical occupational expectations are less likely to enroll in a college preparatory curriculum in grade nine than those with sex-atypical occupational expectations. Parental background is the most important determinant of enrollment in a college preparatory curriculum. Besides the fact that parents affect the educational goals of their children (thus indirectly affecting their curriculum enrollment) parents also directly affect curriculum selection. Black women with educated fathers but less educated mothers enroll in a college track. In contrast, white men with educated mothers enroll in a college track. White women whose parents have high educational goals but white men whose parents have low educational goals enroll in a college preparatory curriculum. Finally, black women whose mothers are in sex-typical occupations and black men with mothers in sex-atypical occupations enroll in a college track. Knowledge of the world of work also contributes to curriculum selection. Young men and women who were able to identify the tasks associated with four jobs enrolled in a college preparatory curriculum in grade nine. This variable appears to be a proxy for ability, since we do not have an ability measure for ninth graders. Finally, youth with friends attending or planning to attend college were enrolled in a college preparatory track in grade nine. These variables explain between 22 and 28 percent of the variance in selecting a college preparatory curriculum in grade nine.

General Curriculum. Men, but not women, with high educational goals are less likely to be enrolled in a general curriculum. Women, but not men, expecting to be in female-typical occupations at age 30/35 are more likely to enroll in a general curriculum in grade nine. Men and women who scored highly in attributing tasks to occupations (the Knowledge

of the World of Work scale) were less likely to enroll in a general curriculum. The model explains between 13 and 37 percent of the variance in general curriculum enrollment.

Commercial Curriculum. Women (but not men) with high educational goals were less likely to be in a commercial curriculum in grade nine. White and black women who expected to be in female occupations at age 35 were less likely to be enrolled in a commercial curriculum in grade nine, while black and white men who expected to be in occupations with a higher proportion female were more likely to be in a commercial curriculum in grade nine. The higher father's education the less likely black men and women were to be in a commercial curriculum, while the more likely white men were to be in that curriculum. White men whose mother's education was high were less likely to be in a commercial curriculum. Finally, the higher the proportion female in mother's occupation, the higher the proportion of black women and white men enrolled in a commercial curriculum. The higher the proportion female in father's occupation the higher the proportion of white males in a commercial curriculum. These variables explain between six and 25 percent of the variance in commercial enrollment.

Vocational Curriculum. Educational goals do not affect vocational enrollment. However, occupational expectations do. Black women and men who expect to work in female typical occupations are less likely to be in a vocational curriculum in grade nine. White women whose mothers worked in sex-typical occupations are less likely to be enrolled in a vocational curriculum in grade nine. These variables explain under 15 percent of the variance in vocational curriculum enrollment.

Sex Differences in Curriculum Selection, A Summary. The same types of factors -- parental background, aspirations, and work knowledge -- affect the curriculum selection of men and women, with race differences small or non-existent compared with sex differences. However, the effects are often opposite in direction. The same parental factor, for example, a highly educated mother, may increase the probability of her daughter entering a given curriculum while decreasing it for her son. It is interesting to note that there is no difference by sex in the effect of educational goals or in the effect of knowledge of the world of work. Higher goals and greater knowledge raise the chances of enrollment in a college track. Unfortunately, since we explained only a small fraction of curriculum enrollment (more for the college track, less for vocational track) we cannot with conficence attribute responsibility for setting early vocational directions. Of our variables, parents appear most responsible for the differential directions of boys and girls at least in grade nine.

## Change in Curriculum between Grades Nine and Twelve

Of course, students do not necessarily remain in the same

curriculum throughout the high school years. One study, looking at all youth (including the college-bound), indicated that curricula tend to be fairly stable over this period, with the vocational curriculum most stable, the general curriculum least stable, and the college preparatory curriculum in between (Evans and Galloway, 1973). These researchers found that of the students in a vocational curriculum in grade 12, 91 percent of males and 79 percent of females had been enrolled in the same curriculum in grade nine. The college preparatory curriculum lost students, the general curriculum gained students.

Other researchers (Grasso and Shea, 1979) note that fewer than one in ten students changed their curriculum from one year to the next. Black males in a college preparatory program moved most. Gross movement resulted in a net gain to occupational curricula (vocational and commercial).

Our results with youth who did not subsequently attend college support these findings. We found that 14 percent of white women, 12 percent of black women, nine percent of white men and 19 percent of black men changed from one track to another between grades nine and 12. Gross movement resulted in a net loss from the general curriculum and a net gain to vocational and commercial curricula. The type of change that occurs depends on race and sex (Table 3).

Grasso and Shea found evidence that curriculum change was consistent with the aspirations of those who switched. They found that youth who shifted to an occupational curriculum initially had held lower educational aspirations than those who stayed, and held somewhat higher goals than those already in an occupational area. More of those who moved to an occupational curriculum also reported that they liked school more after the move than those who didn't move (Grasso and Shea, 1979).

## Factors Associated with Curriculum Choice in Grade 12

The major factors associated with the curriculum of twelfth graders are similar to those described for ninth graders. In addition, each curriculum has affected its enrollees in unique ways. Thus, by grade 12 it is hard to tell what is cause and what effect of curriculum choice. For example, youth who spent time in homework and in extracurricular activities were more likely to be in a college preparatory curriculum. Whether people highly motivated both to do homework and to be active outside the classroom are also motivated to go to college, or whether participation in that track motivates people to other activities and to do homework is unknown. Probably both are true at the same time. Rosenbaum (1976) described a tracking system in high school that parallels a class system. Those in the college prep track are at the top of the hierarchy and are active in everything, while those in other curricula are left out. Support for this interpretation is suggested by our finding that females who are positive in their attitude toward their

Table 3 : High School Curriculum in Grade 12 by Curriculum in Grade 9, Respondents Enrolled in Grades 7 to 9 in 1966/68, by Race and Sex

White Females

| Curriculum 9 | Curriculum 12 Vocational | Commercial | College | General | Total |
|---|---|---|---|---|---|
| Vocational | 100% (1) | 0% (0) | 0% (0) | 0% (0) | 1% (1) |
| Commercial | 0 (0) | 100 (13) | 0 (0) | 0 (0) | 8 (13) |
| College | 0 (0) | 6 (3) | 89 (42) | 4 (2) | 28 (47) |
| General | 5 (5) | 11 (12) | 2 (2) | 83 (90) | 64 (109) |
| Total | 4 (6) | 16 (28) | 26 (44) | 54 (92) | 100 (170) |

Black Females

| Curriculum 9 | Curriculum 12 Vocational | Commercial | College | General | Total |
|---|---|---|---|---|---|
| Vocational | 100 (2) | 0 (0) | 0 (0) | 0 (0) | 3 (2) |
| Commercial | 0 (0) | 20 (1) | 20 (1) | 60 (3) | 7 (5) |
| College | 0 (0) | 0 (0) | 88 (7) | 12 (1) | 12 (8) |
| General | 0 (0) | 4 (2) | 2 (1) | 94 (51) | 78 (54) |
| Total | 3 (2) | 4 (3) | 13 (9) | 80 (55) | 100 (69) |

White Males

| Curriculum 9 | Curriculum 12 Vocational | Commercial | College | General | Total |
|---|---|---|---|---|---|
| Vocational | 100 (10) | 0 (0) | 0 (0) | 0 (0) | 11 (10) |
| Commercial | 0 (0) | 100 (2) | 0 (0) | 0 (0) | 2 (2) |
| College | 0 (0) | 4 (1) | 96 (23) | 0 (0) | 25 (24) |
| General | 10 (6) | 0 (0) | 3 (2) | 86 (50) | 62 (58) |
| Total | 17 (16) | 3 (3) | 27 (25) | 53 (50) | 100 (94) |

Black Males

| Curriculum 9 | Curriculum 12 Vocational | Commercial | College | General | Total |
|---|---|---|---|---|---|
| Vocational | 80 (4) | 0 (0) | 20 (1) | 0 (0) | 9 (5) |
| Commercial | 0 (0) | 0 (0) | 50 (1) | 50 (1) | 3 (2) |
| College | 0 (0) | 0 (0) | 100 (7) | 0 (0) | 12 (7) |
| General | 9 (4) | 4 (2) | 4 (2) | 82 (36) | 76 (44) |
| Total | 14 (8) | 3 (2) | 19 (11) | 64 (37) | 100 (58) |

high school experience are more likely to be in a college preparatory curriculum than in other tracks, with the least positive women in the commercial track. This does not hold for men, however. Men with positive attitudes toward high school are least likely to be in a college preparatory curriculum.

## The Effect of Curriculum on Twelfth Grade Educational and Occupational Goals

Here we begin our examination of the consequences of curriculum selection. One of its most important effects is that on aspirations.

### Educational Goals

Since we have shown that students with higher goals are more likely to enroll in a college preparatory track in grade nine, we would expect those in such tracks to have higher goals in grade 12 than those in other tracks. As expected, young black and white men and women in a college preparatory curriculum have substantially higher educational goals than those in a general curriculum. Young men in a vocational curriculum and young women in a commercial curriculum (both occupational curricula) have lower educational goals than those in a general curriculum. Again since parental factors affect curriculum, they indirectly affect educational goals in grade 12. Parental background also directly affects educational goals in grade 12 even after the effect of curriculum has been controlled. Young men and women, black and white, whose parental educational goal is high have higher educational goals for themselves in grade 12 than those whose parental goals are low. Interestingly, those who grew up speaking a foreign language in the home have higher educational goals than those who didn't, for both races and sexes. White men and women whose father is in a less sex-typical occupation have higher educational goals for themselves than do those whose father is in a more sex-typical occupation, even after his educational level is controlled. Interestingly, public school attendance is associated with higher educational goals for all youth.

### Occupational Goals

Men and women who are enrolled in a vocational curriculum expect to be in an occupation with a smaller proportion of women at age 30/35 than those who were in a general curriculum. In contrast, those who are in a commercial or a college preparatory curriculum expect to be in an occupation with a higher proportion of women. Again family factors directly affect occupational goals in grade 12. Young women with educated mothers and mothers in less sex-typical occupations aspire to less sex-typical occupations at age 35. Men who spoke a foreign language in the home expect to be in jobs with a higher proportion of women. White men whose father is in a less sex-typical occupation aspire to highly

sex-typical occupations themselves. Finally, black and white men and women with higher ability aspire to occupations with a smaller proportion of women (sex-atypical for women, sex-typical for men).

## Change in Educational Aspirations

Substantial changes in the educational and occupational plans of young men and women occur over the high school years. One study based on the "Parnes" data (and all youth) found that 60 percent changed their occupational goals and 40 percent changed their educational goals during that period (Grasso and Kohen, 1977). We found that among those who did not later attend college, 47 percent of white males, 40 percent of white females, 50 percent of black males, and 46 percent of black females changed their educational goals between grades nine and 12 (Table 4). The average change was negative; that is, youth lowered their goals for schooling between grades nine and 12. Young women lowered their goals more than did young men; however, because their goals were higher to begin with, even in grade 12 young women have higher educational goals than young men (the difference is small). Black women lowered their goals the most, almost half a year on average, while black men lowered theirs the least (Table 5).

What factors are associated with changing educational goals? Grasso and Shea (1979) found that men in college preparatory curricula were more likely to raise than lower their aspirations over the high school years, while the opposite was true of those in occupational curricula. However, they found that women in vocational areas were more likely to raise than lower their goals. Grasso and Shea (1979) also found that those who changed their curriculum changed their educational goals. Women who moved to an occupational program lowered their goals; in contrast, men who moved to an occupational program raised their educational goals. Grasso and Kohen (1977) found that a downward revision in goals was likely for those whose base-year goal was unrealistic, incongruent, or not confidently held. In our study of non-college youth, we found, of course, that the higher the initial level of aspirations, the larger the decline over the high school period.[1] Net of initial level of aspirations, we found a number of other important factors. Black men and women in a sex-typical occupational curriculum (vocational or commercial) reduced their educational goals, black men in a sex-atypical vocational curriculum increased their educational goals. White men in a college preparatory curriculum increased their educational goals. Parents, teachers, and peers

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1. This is the "regression to the mean" effect standard in the study of change. Regressing the change in a variable on its initial level plus other independent variables results in a negative coefficient for the initial level (see, for example, Coleman, 1968).

Table 4: Percentage Changing Educational Goal between Grades 9 and 12, Respondents Enrolled in Grades 7 to 9 in 1966/68, by Race and Sex

| | Decrease | Same | Increase |
|---|---|---|---|
| WHITE | | | |
| Male | 31.3% (51) | 52.8% (86) | 15.9% (26) |
| Female | 27.0 (68) | 60.3 (154) | 12.7 (32) |
| BLACK | | | |
| Male | 26.9 (42) | 49.4 (77) | 23.7 (37) |
| Female | 30.6% (52) | 53.5% (91) | 15.9% (27) |

Table 5 : Educational Goal in Grade 12 by Educational Goal in Grade 9
Respondents Enrolled in Grades 7 to 9 in 1966/68, by Race and Sex

**White Females**

| | | Educational Goal at Grade 12 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | <12 | | 12 | | >12 | | Total | |
| Educational Goal at Grade 9 | <12 | 33% | (1) | 0% | (0) | 67% | (2) | 1% | (3) |
| | 12 | 4 | (4) | 75 | (77) | 20 | (21) | 40 | (102) |
| | >12 | 1 | (1) | 26 | (39) | 73 | (107) | 58 | (147) |
| | Total | 2 | (6) | 46 | (116) | 52 | (130) | 100 | (252) |

**Black Females**

| | | Educational Goal at Grade 12 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | <12 | | 12 | | >12 | | Total | |
| Educational Goal at Grade 9 | <12 | 25 | (1) | 0 | (0) | 75 | (3) | 2 | (4) |
| | 12 | 10 | (6) | 71 | (45) | 19 | (12) | 37 | (63) |
| | >12 | 3 | (3) | 29 | (30) | 68 | (70) | 61 | (103) |
| | Total | 6 | (10) | 44 | (75) | 50 | (85) | 100 | (170) |

**White Males**

| | | Educational Goal at Grade 12 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | <12 | | 12 | | >12 | | Total | |
| Educational Goal at Grade 9 | <12 | 50 | (2) | 50 | (2) | 0 | (0) | 2 | (4) |
| | 12 | 15 | (12) | 63 | (50) | 22 | (17) | 48 | (79) |
| | >12 | 4 | (3) | 25 | (20) | 71 | (57) | 49 | (80) |
| | Total | 10 | (17) | 44 | (72) | 45 | (74) | 100 | (163) |

**Black Males**

| | | Educational Goal at Grade 12 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | <12 | | 12 | | >12 | | Total | |
| Educational Goal at Grade 9 | <12 | 25 | (1) | 75 | (3) | 0 | (0) | 2 | (4) |
| | 12 | 10 | (9) | 59 | (51) | 30 | (26) | 55 | (86) |
| | >12 | 9 | (6) | 30 | (20) | 61 | (40) | 42 | (66) |
| | Total | 10 | (16) | 47 | (74) | 42 | (66) | 100 | (156) |

also contribute to goals change. Young men and women who received parent help and encouragement to continue past high school and whose parental educational goal is high increased their own goals. Those with friends in college increased their educational goals over the high school period, net of initial level of goals, curriculum, and other factors. Women who know about the world of work increased their educational goals over the period, net of initial goals, curriculum, and other factors.

## Change in Occupational Aspirations

Changes in the sex-typicality of the occupations young men and women expect to be in by age 30/35 are small, a difference of only a few percentage points. White women and white men expect to be in slightly less sex-typical occupations in grade 12 than in grade nine. Black women and black men expect to be in slightly more sex-typical occupations in grade 12 than in grade nine (Table 6). There is no literature on the change in sex-typicality of expected occupation between grades nine and 12. Unfortunately there were too few cases in our data to adequately discuss this issue. As a result, it will have to wait for a more appropriate data set.

## Summary and Conclusions

We found substantial evidence for the contribution of structural as well as socialization factors to the process of occupational and educational choice at the high school level. Of the three possible criteria for allocation, sex appears to be the critical factor. The same process leads to entirely different curricular and occupational choices, depending on the sex of the youth. These results make more sense when we refer to occupations as male or female sex-typed. Similar factors lead boys and girls into sex-typed occupations. In contrast, evidence of selection on the basis of race is small. The effect of race disappears for the most part when social class is controlled. Within racial-sex groupings, there are more differences by sex than by race. That is, the process of curricular and occupational choice is more similar for white and black women and white and black men than for black women and black men or white women and white men. Social class is an important source of allocation. Social class background continues to play a small part in the twelfth and occupational and educational aspirations of youth, even controlling for ability, intervening experiences, and ninth grade goals. However, for the most part parental influences operate through influencing the early educational and occupational aspirations and the curriculum choices of youth through the socialization process. In addition, however, ability and knowledge of the world of work do influence choice and aspirations.

In general, the higher the education of parents and the higher their aspirations for their children, the higher the ninth grade educational goals of the children and the more likely they were to be in a college preparatory curriculum. Interestingly, children of parents with sex-typed

Table 6 : Expected Occupation in Grade 12 by Expected Occupation in Grade 9, Respondents Enrolled in Grades 7 to 9 in 1966/68, by Race and Sex

**White Females**

| | Expected Occupation at Grade 12 | | | |
|---|---|---|---|---|
| | 0-.23 | .24-.53 | .54-1.00 | Total |
| Expected Occupation at Grade 9 | | | | |
| 0-.23 | 57%(4) | 14%(1) | 29%(2) | 13%(7) |
| .24-.53 | 17 (1) | 67 (4) | 17 (1) | 11 (6) |
| .54-1.00 | 7 (3) | 14 (6) | 79 (33) | 76 (42) |
| Total | 14 (8) | 20 (11) | 66 (36) | 100 (55) |

**Black Females**

| | Expected Occupation at Grade 12 | | | |
|---|---|---|---|---|
| | 0-.23 | .24-.53 | .54-1.00 | Total |
| Expected Occupation at Grade 9 | | | | |
| 0-.23 | 20 (1) | 0 (0) | 80 (4) | 7 (5) |
| .24-.53 | 0 (0) | 29 (2) | 71 (5) | 10 (7) |
| .54-1.00 | 2 (1) | 9 (5) | 90 (52) | 83 (58) |
| Total | 3 (2) | 10 (7) | 87 (61) | 100 (70) |

**White Males**

| | Expected Occupation at Grade 12 | | | |
|---|---|---|---|---|
| | 0-.23 | .24-.53 | .54-1.00 | Total |
| Expected Occupation at Grade 9 | | | | |
| 0-.23 | 87 (73) | 8 (7) | 5 (4) | 82 (84) |
| .24-.53 | 62 (8) | 15 (2) | 23 (3) | 13 (13) |
| .54-1.00 | 100 (6) | 0 (0) | 0 (0) | 6 (6) |
| Total | 84 (87) | 9 (9) | 7 (7) | 100 (103) |

**Black Males**

| | Expected Occupation at Grade 12 | | | |
|---|---|---|---|---|
| | 0-.23 | .24-.53 | .54-1.00 | Total |
| Expected Occupation at Grade 9 | | | | |
| 0-.23 | 76 (59) | 14 (11) | 10 (8) | 72 (78) |
| .24-.53 | 78 (14) | 22 (4) | 0 (0) | 16 (18) |
| .54-1.00 | 61 (8) | 8 (1) | 31 (4) | 12 (13) |
| Total | 74 (81) | 15 (16) | 11 (12) | 100 (109) |

occupations held lower educational goals than children of parents with less sex-typed occupations. Peers also influenced educational goals. The effect of family factors on ninth grade occupational aspirations was weak; young women with mothers who worked for pay were in more sex-typical occupations than those with mothers who didn't work. Knowledge was important here -- women who knew about the world of work had sex-typed aspirations in ninth grade.

Aspirations, in turn affect curriculum enrollment. The higher the educational goal the more likely youth are to enroll in a college preparatory curriculum and the less likely to enroll in a general curriculum. Young women with highly sex-typed occupational aspirations are more likely to enroll in a general curriculum and less likely to enroll in the other curricula, while young men with sex-typed aspirations are likely to enroll in a vocational curriculum, least likely to enroll in a commercial curriculum. After goals and aspirations, family characteristics are the most important factors associated with curriculum choice. Women with mothers in sex-atypical jobs are more likely to be in the vocational track, while males with fathers in sex-atypical jobs are more likely to be in a commercial track. Finally, knowledge of the world of work, a proxy for ability, is associated with curriculum choice. The more knowledge about the world of work the more likely youth are to be in a college track and the less likely to be in a general track.

What are the consequences of enrollment in different curricula during the high school years on twelfth grade educational and occupational aspirations? Men and women in a college preparatory curriculum in grade twelve have higher educational goals and those in an occupational curriculum (vocational or commercial) have lower educational goals than those in a general curriculum. Even after controlling for high school curriculum (which is subject to parental influence) parental factors continue to affect educational goals in twelfth grade. Children whose parents have high goals for them have high educational goals themselves. In addition, men and women whose father was in a less sex-typical occupation have higher educational goals for themselves than do those whose father was in a more sex-typical occupation, even controlling for his educational level. Men and women in a vocational curriculum in high school expect to be in an occupation with a smaller proportion of women at age 30/35 (less female-typical, more male-typical) while those in a commercial or college preparatory curriculum expect to be in an occupation with a higher proportion of women (more female-typical, less male-typical) than those in a general curriculum. Again, parental factors are important even after curriculum is controlled. Women whose mother's educational level is high and her occupation sex-typical aspire to less sex-typical occupations at age 35. In contrast, men whose father is in a sex-atypical occupation aspire to sex-typical occupations themselves. Finally, youth with higher ability aspire in grade 12 to be in occupations with a smaller proportion of women.

However, since those entering college tracks have higher goals to begin with, and those entering vocational/commercial tracks lower goals,

a better test of the effect of curriculum per se is its effect on educational goals over time. What factors are associated with change in the educational goals of individuals? We found that men and women in a sex-typical occupational curriculum (vocational or commercial) in grade nine reduce educational goals between grades nine and 12, while men in a college preparatory curriculum increase their educational goals over the period. Other research has found that changing curriculum is associated with changing goals.

Although others have found evidence to suggest that individuals choose their curriculum and course work in line with preferences, the evidence we found overwhelmingly suggests that, in contrast, preferences are in line with socialization based on strongly held "rules" as to the proper and different roles of the sexes. This socialization begins much earlier than grade nine. By the high school years men and women are already on completely separate life paths.

## CHAPTER 3: FAMILY FORMATION, SCHOOLING AND JOB TRAINING

For those who do not continue on to college, high school bridges the gap between childhood and adulthood. Men and women prepare for employment; women prepare for marriage and childbearing as well. Some marry high school sweethearts and begin their families and employment at the same time. For others the growing up process comes a bit too soon; young mothers drop out of school to care for children; young fathers drop out to support their families. Women who dropped out of the labor force to care for children may return to the labor force as they find that they can no longer afford the luxury of staying home. What difference does high school experience make in the early post-high school lives of youth? In this chapter we look at the age at which they marry and start their families, at the amount of schooling they complete (whether or not they complete high school), and at whether they obtain additional job training, other than college.

### Family Formation -- Marriage and Childbearing

A very high proportion of non-college youth marry in high school or immediately after, with whites more likely than blacks to marry early. By three years after high school 75 percent of white women, 62 percent of black women, 63 percent of white men, and 43 percent of black men have been married. Five years after high school 88 percent of white women, 68 percent of black women, 78 percent of white men and 62 percent of black men have been married. In contrast, a smaller proportion of all youth, including college goers, married early. According to information on youth born between 1946 and 1950 (contained in the Current Population Surveys), five years after high school 65 percent of white women, 56 percent of black women, 45 percent of white men, and 42 percent of black men have ever been married. Another survey of youth born approximately 1954-55 (the National Longitudinal Survey of the High School Class of 1972), found the proportions ever married five years after high school to be even smaller: 55 percent of white women, 41 percent of black women, 36 percent of white men, 33 percent of black men. These lower figures reflect both the rise in marriage age that was occurring over the period in which they matured and the larger proportion of college-goers among this group (see Appendix). Since women marry at younger ages than do men, it is no surprise that more women than men have married by three and five years after high school. By ten years after high school the difference between the sexes has narrowed substantially, although a race differential remains. The difference between all youth and non-college goers has also declined substantially.

In our study we were more interested in the proportion actually married three, five and ten years after high school than in those who had ever married. In Table 7 we show the proportion actually married at each time point, comparing it with the proportion ever married. Although the same proportion of men as women has ever been married ten years after high school, a larger proportion of men than women is currently married at that point. For whites this reflects the fact that men marry later. At a given

Table 7 : Percentage of Ever-Married Respondents Who Are Currently Married Three, Five, and Ten Years After High School, Respondents Not Enrolled in School in 1966/68

| | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Three Years After High School | | | | |
| A: Ever Married | 75% | 62% | 63% | 43% |
| B: Currently Married | 71 | 49 | 60 | 35 |
| B/A | 95 | 79 | 95 | 81 |
| Five Years After High School | | | | |
| A: Ever Married | 88 | 68 | 78 | 62 |
| B: Currently Married | 80 | 51 | 73 | 54 |
| B/A | 91 | 75 | 94 | 87 |
| Ten Years After High School | | | | |
| A: Ever Married | 95 | 78 | 89 | 78 |
| B: Currently Married | 84 | 57 | 83 | 62 |
| B/A | 88 | 73 | 93 | 79 |

age, women have been married longer and have, therefore, had more of a chance to get divorced. The divorce rate for white women slightly exceeds that of white men. In contrast, there is little difference between black men and women in the probability of divorce. It is likely that for them the differential in the proportion currently married is a result of a differential probability of remarriage after divorce. Blacks are less likely to marry and twice as likely to divorce as are whites.

For non-college youth the high school and early post-high school years constitute a period of family building as well as family formation. A substantial number of young women had children when they were or should have been in twelfth grade. These figures grow following high school. Three years after high school 49 percent of white women and 71 percent of black women have children, compared with 33 percent of white men and 31 percent of black men (who reported children living with them). Five years after high school the figures are 67, 76, 49 and 42 percent respectively. Although black women begin their family building earlier than do white women, the difference declines over time. By ten years after high school 84 percent of white and black women have children. Among men the figures are curious. By ten years after high school only 46 percent of white and 37 percent of black men have children living in the home. We suspect that these declines are due to divorce and separation; the children live with their mothers.

In contrast to non-college youth, the proportion of all youth who have children five and ten years after high school is much smaller. According to Current Population Survey Figures (birth cohort 1946-1950), 42 percent of white women and 62 percent of black women have children five years after high school. By ten years later these figures are 78 and 84 percent, respectively. The figures obtained from the National Longitudinal Survey of the class of 1972 are lower: 25, 48, 15 and 37 percent for white women, black women, white men, and black men five years after high school. Ten years after high school the figures from Project Talent (1945-46 birth cohort) are comparable to those of non-college youth: 82 and 75 percent for women and men, respectively.

## Factors Associated with Early Family Formation

There has been very little research so far on the factors associated with the age at which a young man or woman marries or bears a first child. One study (Marini, 1978) found completed schooling to be the best predictor of age at first marriage. Those with more schooling marry later. However, Moore and Hofferth (1980) found no direct effect of education on age at marriage when age at first birth, an important predictor of marriage age was controlled. Net of completed schooling, several other factors affect marriage age. Dating frequency during the last two years of high school predicts early marriage (Marini, 1978). Net of education and age at initiation of childrearing, expressed ideal age at marriage is one of the best predictors of young women's age at marriage (Moore and Hofferth, 1980). Bayer (1979) found marriage plans to be among the best predictors of age at first marriage for men and women. White women and

women who had mothers employed outside the home when they were age 14 were likely to marry young (Moore and Hofferth, 19800. Other factors affect age at first marriage only indirectly, through their effects on age at first birth or on completed schooling.

What factors are associated with early childbearing? Moore and Hofferth (1980) hypothesized that young women whose alternative opportunities are brighter are less likely to have an early birth. They found, for example, that students in a college preparatory curriculum were more likely to postpone childrearing (Moore and Hofferth, 1980). In addition, white girls and girls who grew up in intact families were likely to postpone childbearing and rearing.

Since most of these non-college youth have been married and most have children by ten years after high school, in our study we focused on factors associated with being currently married and with the number of children they have three and five years after leaving high school.

## High School Experience

High school curriculum affects the timing of marriage of white men. Young white men who were enrolled in a college preparatory curriculum were less likely to be married three years after high school than those in other curricula. Curriculum does not affect when women marry. In contrast, curriculum does affect how many children they have. White women in commercial and in college preparatory tracks have fewer children three years after high school than do those who were in a general curriculum. It has no comparable effect for men.

Other high school experiences affect the timing of marriage and childbearing. Black men who had several friends who went on to college are less likely to marry three years after high school than those with few friends college-bound. White and black women with friends in college have fewer children three and five years after high school. White men who spent more hours in homework have fewer children five years later while black women who spent more time in homework are more likely to be married than their peers. White men and women who cited sports as their favorite extra-curricular activity in high school are less likely to be married within the first three and five years after school. In contrast, comparable black women are more likely to be married and have more children. The more hours spent in extra-curricular activities the less likely black women and white men are to marry. In contrast, black men are more likely to marry and have larger families three years later. Finally, white men who worked in high school are more likely to be married within three years after high school than those who didn't work. With a few exceptions it appears that degree of integration in high school activities and greater post-school opportunity are associated with postponement of family formation and family building during the early post-school years.

## Background

Net of other factors able black women are less likely to be married three years after high school. They also have fewer children. In contrast, able white women of similar education are more likely to be married. Black men who know more about the world of work are less likely to be married three years later. As expected from demographic trends, men and women from more recent birth cohorts are less likely to be married five years after high school, although by ten years cohort differences have disappeared. As other research has found for black and white women, growing up in an intact family is associated with having fewer children. Black and white women of more recent birth cohorts actually have more children by the third year out of school than those of earlier cohorts; however, by ten years after high school, youth in more recent birth cohorts have fewer children than those of earlier cohorts. This suggests that recent birth cohorts may start childrearing sooner, but they finish it sooner too. White women from large families have more children five years after high school, while black women from large families have fewer children. Black women with a health problem are less likely to marry and white southern women are more likely to be married five years later. Black urban men have more children than non-urban men.

## School Characteristics

School variables explain little of the variance in marital status -- two percent for black men. They explain three percent of the variance in the number of children black women have, four percent of the variance in the family size of black men ten years after high school.

## Schooling

Of course, one of the major effects of high school is to direct some on to college and to direct others in other ways. High school curriculum is particularly important in this regard. Students in a college preparatory curriculum are much more likely to attend college than those in other curricula in high school. Since we know from other studies that the amount of schooling a person has completed has an important impact on later achievements, we infer that school curriculum has at least an indirect impact on them as well. Other aspects of high schools have relatively small effects on college graduates; however, they may have larger effects on the non-college bound student. Do high schools have direct or indirect effects on the later schooling of youth with a high school education or less? We will first consider whether or not youth obtain a high school degree and, second, whether they obtain post-secondary training (but not college).

## School Completion

Three years after high school 74 percent of white women, 56 percent of black women, 59 percent of white men, and 37 percent of black

men have graduated from high school. Five years after high school the figures are 76, 57, 65, and 46 percent, respectively. Ten years after high school 80, 59, 70, and 50 percent have completed high school. From these figures it appears as though by three years after high school young women have mostly completed their schooling. Between three and ten years after school six percent of white women obtain their diplomas, only three percent of black women. In contrast 11 percent of white men and 13 percent of black men completed their degrees between three and ten years after high school. Whites are more likely than blacks to obtain diplomas.

## High School Curriculum and School Completion

Are occupational students (vocational and commercial tracks) more or less likely to complete high school than their peers in either the general or the college preparatory track? Grasso and Shea (1979) found that compared with those from a general program and of the same race and sex, men in vocational programs were more likely to drop out of school over a one year period (and without completing grade 12). They found that men and women in college preparatory and in business and office or commercial programs were less likely to drop out over the same period. Stromsdorfer (1972) also reports several studies that found male vocational graduates less likely to finish high school. The latter interprets the data to suggest that for many vocational students the time spent in such programs in secondary schools may be too long; that there is no premium for such schooling. Other studies contradict these results. Hill (1977) found vocational and commercial enrollees less likely to drop out of school over a two-year period than college preparatory and general enrollees, net of other factors. Evans and Galloway (1973) found general and college preparatory curriculum graduates less likely to finish high school than occupational program graduates.

Some of those who drop out will later return to finish school. More important than dropping out of school is whether a person eventually finishes. In our study we looked at factors associated with completing school by three, five, and ten years after the person should have been in twelfth grade. Our sample was restricted to those who did not subsequently attend college. For these young people we found that compared with those in a general curriculum, men in a vocational or commercial curriculum and white women in a business/office curriculum were more likely to have completed high school by three and five years later. Three years after high school black women who were in a college preparatory curriculum were more likely to have graduated net of other factors. By ten years after high school the effect has disappeared for men but remains for white women in a commercial curriculum.

High school experiences contribute substantially to high school completion. Besides curriculum, other factors are important. Not surprisingly, youth with a positive attitude toward high school are more likely to have completed school three, five and ten years later, regardless of race or sex. The more time youth spent in homework, the more likely they are to have completed high school three, five and ten years later. Youth who had friends in college and who worked in high school are more likely to have

graduated from high school ten years later, for both sexes and races. Youth who cited sports as their favorite extra-curricular activity are less likely to have graduated from high school three, five and ten years later. However, the more time spent in extra-curricular activities the more likely to have graduated. The only surprising result is that youth who cited math as a favorite subject (and did not subsequently attend college) were less likely to have graduated three years, and ten years later, net of other factors. Other researchers have found high educational and occupational expectations associated with school completion. Unfortunately, we have no measure for youth already out of school.

Family Formation and High School Completion

Recent research indicates that early marriage reduces the amount of schooling a young woman will eventually complete (Marini, 1978; Voss, 1977). Other studies attribute the effect to childbearing, not marriage (Bacon, 1974, Trussell, 1975; Furstenberg, 1976; Presser, 1976; Moore et al., 1979), or to both (Moore et al., 1979). Early marriage appears to have no effect on the educational attainment of men (Marini, 1978), although it may have a positive effect (Voss, 1977), due to wives who put their husbands through school. Early childbearing has not been found to reduce the schooling men attain (Kerckhoff and Parrow, 1977), although it has been found to affect the prestige of the occupations in which they are employed (Card, 1977). Its effects could be expected to be stronger on non-college youth, however.

Our research indicates that being married does not affect school completion three, five, or ten years later; however, the number of children young people have reduces their chances of finishing high school three, five or ten years after leaving school. The impact is stronger three and five years after high school than it is ten years later. In addition, the effect is stronger for young women than for men. It is statistically significant for women and for white men three and five years after high school, and for women ten years after high school. It is negative but not statistically significant for black men at any time point. However, black men are much less likely than white men to have their children living with them. These results are interesting because they support earlier work that found a significant negative impact of childbearing and rearing upon the lives of men as well as women. Other studies that have failed to find such effects have not focused on the non-college student. These are the ones most likely to form their families early and suffer for it, since their completed schooling is low. It is not even marriage, but having children that reduces young men's and women's options for at least the first decade after leaving school. Other research suggests that the differential does continue, at least for women (see Moore et al., 1979; Hofferth and Moore, 1979).

Background Variables

For both men and women, coming from a high socioeconomic status background and receiving parental encouragement to continue past high school are associated with not dropping out of school (Hill, 1977; Grasso,

1978; Reich and Young, 1975). For both men and women having a greater intellectual ability is associated with completing high school (Hill, 1977; Grasso, 1978). Knowing more about the world of work is associated with finishing high school (Hill, 1977). We found comparable results with non-college youth. Youth whose parents were high in socioeconomic status and whose parents held high educational goals for their children, were more likely to complete high school. Those from a farm background and from an intact family had a better chance of high school graduation. Men, but not women, with high ability were more likely to graduate. Of course, a higher proportion of women graduate from high school regardless of ability. Youth who knew more about the world of work were more likely to graduate from high school. Those with a health problem (white women) and who lived in the south were less likely to graduate. Finally, more recent birth cohorts were less likely to have graduated from high school three and five years later, but more likely to have graduated by ten years after high school than earlier cohorts.

School Characteristics

School factors explain between three and four percent of the variance in high school graduation for black men and women ten years after high school.

## Post-School Training

Unfortunately, in our analysis of job training, we obtained only a measure of whether or not individuals obtained any job training in the last year. Since this measure is not a good indicator of whether or not an individual had ever obtained training, we have not reported any results from our own study. However, there is some information on the same sample of young men and women from the National Longitudinal Surveys, reported in Grasso and Shea (1979). In addition, there is information available from the National Longitudinal Survey of the High School Class of 1972, reported in Wiley and Harnischfeger (1980). This section is heavily based on these two studies. Unfortunately, since their samples were defined differently and since neither used multivariate techniques to analyze the probability of obtaining training, the studies are not completely comparable to ours.

About two out of every three non-college men and half of all non-college women reported having received some post-school training (outside of regular school) in the National Longitudinal Surveys (Grasso and Shea, 1979). Military training was not included in these figures. Black men were less likely than white men to report training, while black women were more likely than white women to obtain some training. Among whites there were no differences in post-school training between high school graduates with no additional academic schooling and those with such schooling. Among blacks, those with 13 to 15 years of schooling were most likely to have received training. Grasso and Shea found that among high school graduates (12 and no more years of schooling) there were substantial differences in training by high school curriculum. For both races and sexes, those who were in a

college preparatory program were much more likely to receive training after high school. Among women, black and white women in business and office programs were next most likely to obtain training, followed by those in vocational and general curricula. Among men, there were no differences by curriculum, once those in a college preparatory program are removed (Grasso and Shea, 1979). These differences make sense intuitively. College preparatory graduates who do not subsequently attend college go on to obtain specialized training, while those who obtained such training in high school are less likely to go on (except for women in business programs). Studies summarized by Stromsdorfer (1972) support these results. There is a higher payoff to academic graduates who go on to post-secondary vocational training than to vocational graduates. Evans and Galloway (1973) found that those in a general curriculum in high school were least likely to obtain additional training.

In looking at all youth, not just those who complete twelfth grade or less, high school programs strongly predict post-secondary schooling. Including academic (college) and vocational training together, 85 percent of academic graduates, 51 percent of general graduates and 39 percent of vocational graduates obtained post-secondary school training (Wiley and Harnischfeger, 1980). Of the vocational graduates, 22 percent obtained vocational training, of the academic graduates, 8 percent obtained vocational training, and of the general graduates, 16 percent obtained vocational training. Hours of vocational course work in high school was the best predictor of whether or not youth obtained post-secondary vocational training. For whites, the more hours in vocational course work the more likely to obtain post-secondary vocational training. For blacks, in contrast, the more hours in vocational course work the less likely to obtain vocational training (Wiley and Harnischfeger, 1980).

The proportion reporting specialized training is high. According to data from Grasso and Shea (1979), it has been sharply increasing for both black and white men with twelve years of schooling or less, such that the gap between black and white men declined over the period. Young men and women received training after high school from such sources as business and technical schools, adult education, company sponsored training programs, apprenticeship programs and so on. Grasso and Shea (1979) found that young women from high socio-economic backgrounds and with high abilities are more likely to obtain post-high school training.

## Summary and Conclusions

High school experiences are much more important determinants of the later family formation, schooling, and job training of non-college youth than family background. Of course, family background has indirect effects on these outcomes through high school experiences such as curriculum and through aspirations. As we might expect, high school experiences affect school completion and job training most strongly, they affect family formation less strongly.

We found that in comparison to youth in a general curriculum, men

and women who were enrolled in occupational curricula (and black women in college preparatory curricula) were more likely to finish school within the first three to five years after high school. By ten years later, however, the effect has disappeared for men, but not for women. Women who were in commercial programs are still more likely to have graduated ten years later. Thus occupational programs provide some impetus to their students to complete high school, even if they do not complete it on time. Other high school experiences influence whether or not youth graduate. Those with a positive attitude toward high school, those who spent more time in homework, those who had friends in college, those who worked in high school and those who spent time in extra-curricular activities were more likely to graduate. These results are similar to those found by other researchers who studied all youth, including the college-bound. In sum, young people who were better students, involved in school activities, yet connected to the workaday world are more likely to graduate from high school.

Parental background does affect whether or not youth finish school, even controlling for effects of high school experience; however, its direct effects are rather small. The socioeconomic status of the family, parental education goals, and whether the family was intact affected whether or not a youth finished high school. The effects of parental background are primarily indirect; they influence the high school curriculum and the goals and aspirations of their children.

Other factors associated with finishing school include ability and knowledge about the world of work. Finally, family formation, but not marriage, affects school completion. The larger the number of children, the less chance youth have of finishing high school three, five or ten years later. Although stronger for women than for men, family size significantly affects school completion three and five years after high school for both sexes. Ten years after high school, it is significant only for women. These results for non-college youth support earlier work that found a significant negative impact of childbearing upon the lives of men as well as women.

High school curriculum has been found by other researchers to affect the chances of youth obtaining job training. In general, college preparatory graduates who do not later attend college are more likely to obtain training after high school than graduates of occupational programs, with the exception of women in business and office programs. The latter are also likely to obtain post-high school training. A large proportion of high school graduates and drop-outs do go on to post-secondary training (half of the women, two-thirds of the men), with graduates more likely than drop-outs to obtain some training.

High school experiences affect the probability of marrying and having children. Young white men who were enrolled in a college preparatory curriculum are less likely to be married three years after high school than those in other curricula. White women enrolled in commercial and in college preparatory tracks in high school have fewer children three years later than do those who were in a general curriculum. The effects of other high school experiences suggest that here, as in school completion, those

with alternative opportunities, who participate in school activities and who are highly motivated to succeed are likely to postpone marriage and family formation. For example, those with friends in college are less likely to marry and have fewer children. White men who worked in high school are more likely to be married within three years than those who did not.

In contrast to the findings of other researchers on all youth, parental socioeconomic status does not affect the family formation of non-college youth, with minor exceptions. Young women growing up in intact families have fewer children than those growing up in broken families. White women from large families have more children, while black women from large families have fewer children than those from small families.

Ability and demographic factors affect family formation. Able black women are less likely to be married, and have fewer children, net of other factors. In contrast, able white women are more likely to be married. Black men who know more about the world of work are less likely to be married. Men and women from more recent birth cohorts delay marriage and have fewer children ten years later than these from earlier cohorts.

## CHAPTER 4: EMPLOYMENT, UNEMPLOYMENT, AND WORK EXPERIENCE

We hypothesized in our introductory chapter that factors in the high school experience that are associated with later labor market success for college-bound students would differ from those associated with the success of non-college students. For the latter, ocupational preparation such as is part of a commercial or other vocational curriculum should be associated with a higher probability of being employed, with less unemployment, with a greater number of hours worked, and with greater work experience. We also explore the differential impact of family, ability, and other contingencies, as well as high school experiences and race and sex on the labor market outcomes of youth.

### Employment

Most youth enter the work force immediately or soon after leaving school. This is especially so for young men. We mentioned earlier that about half of young men are employed (60 percent of whites, 49 percent of blacks) when they should be in grade 12. By three years after high school, 95 percent of white men and 86 percent of black men are employed. Forty percent of white women and 24 percent of black women were employed in grade 12. Three years later, 56 percent of white and 48 percent of black women are employed. As expected, the proportion employed increases gradually over the following years, until by ten years after high school 97 percent of white and 89 percent of black men are employed. The proportion of black women employed also increases gradually; by ten years later 57 percent are employed. In contrast, the proportion of white women employed decreases gradually until, ten years after high school, 45 percent are employed.

Black men and women consistently experience more unemployment than do white men and women, almost twice as many weeks in a given year, and black men experience more than black women. Unemployment declines between three and ten years after high school for all youth. Three years after high school the number of weeks unemployed are 1.46, 3.53, 1.61 and 4.37 for white women, black women, white men, and black men respectively. Ten years after high school the figures are 1.22, 2.75, 1.49 and 3.68 respectively.

Labor force participation is high for black and white men three, five, and ten years after high school, with more than nine out of ten in the labor force. However, participation rates are somewhat lower and unemployment rates higher for black than for white men, such that a higher proportion of white than black men is employed three years after high school (95 versus 86 percent). Labor force participation rates remain the same while unemployment declines for black and white men over the decade after high school, narrowing but not eliminating the difference in employment between black and white men.

Labor force participation rates are similar for black and white women three years after high school -- about three out of five women are in the labor force. Again, unemployment is higher for black than for white

women, so that fewer black women are actually employed at that time. The labor force participation of black women remains somewhat constant over the decade after high school. Since the unemployment rate declines (from 14 to about 6 percent) the proportion employed increases gradually over the same period. By ten years later 57 percent are employed. In contrast, the unemployment rate for white women remains fairly constant -- five percent, while their labor force participation rate declines, resulting in a gradual decline in the proportion employed. Ten years after high school 45 percent of white women are employed.

Although women are much less likely than men to be employed, employed women work almost as many hours as their male peers. White men work full-time three, five, and ten years after high school. Black men work only slightly fewer hours, on the average. White and black women who work, work 95 percent of the time men work -- they work between 35 and 40 hours a week, full-time, three and five years after high school. However, the hours white women work decline gradually over the decade after high school until, by ten years afterwards, they work about 80 percent of the time -- about 30 hours per week. The hours black women work decline only slightly -- they work 86 percent of a full schedule ten years after high school -- about 34 hours per week.

As can be expected from the information on the proportion working each year, women have worked fewer years since leaving school than men of the same age. On the average, men work every year after they turn 18; women work about half the years after they turn 18. The number of years worked ten years after high school averages 9.61 for white men, 4.65 for white women, 9.60 for black men and 4.52 for black women.

How does the labor force participation and employment history of non-college men and women during the decade after high school compare with that of their college-bound peers? By five and ten years after high school, the majority of youth, college- and non-college-bound alike, have completed school. Data from the Current Population Surveys (birth cohort 1946-50) indicate that about the same proportion of women (and a slightly smaller proportion of men) in the total sample of youth are in the labor force and employed as in our sample of non-college youth. Data from the National Longitudinal Survey of the High School Class of 1972 indicate a much larger proportion of women and a smaller proportion of men in the labor force. This latter group is more educated, which probably accounts for both the higher participation of women (educated women being more likely to work) and the smaller proportion of men in the labor force (more of whom are in school). In their study of out-of-school youth with ten to fifteen years of schooling, Grasso and Shea (1979) found the labor force participation rates of men and women similar to those we found. Our non-college group is characterized by a higher rate of male participation and about the same rate of female participation as in the population at large.

## Factors Associated with Employment

Whether a man is employed or not in a given year is a less

interesting question than whether or not a women is employed, since almost all non-college men are employed, at least by ten years after high school. As expected, the models explain much more of the variance in the employment of women than of men. We will focus here on the employment of women; however, in reporting our results significant results will be reported for men as well.

There is a substantial body of research on the labor supply of women. High school curriculum has no effect. Grasso and Shea (1979) report no difference between graduates of different curricula in labor force participation rates. Wiley and Harnischfeger (1980) found male vocational graduates more likely to be employed four years after high school and female academic graduates less likely to be employed four years after high school than graduates of other curricula. However, since students were included in this sample, the sex difference reflects differential enrollment.

Researchers have found race, age, years of schooling, work experience, income, the ages and number of children, and marital status to predict the labor force participation of women (Bowen and Finegan, 1969; Cain, 1978; Crimmins-Gardner and Ewer, 1978; Farkas, 1977).[1] In addition, whether her husband is employed or not predicts the participation of the married woman (Bowen and Finegan, 1969). Married women have lower participation rates than non-married women (Mincer and Polachek, 1974), although the gap is narrowing (U.S. Department of Labor, 1977). One explanation for the narrowing gap is that factors inhibiting wives from working seem to have decreased (Waite, 1976). Another explanation is that of changes in the age structure of the population and declining relative income (Wachter, 1977). Better educated women are still more likely to work (Bowen and Finegan, 1969). This may be due to a differential taste for work or to the higher wages and better jobs better educated women can obtain. Married black women have higher participation rates than do married white women (Bowen and Finegan, 1969). Since this difference remains even when need and family size are controlled, the race differential in participation rates may reflect differential tastes for working. However, this difference is also declining, as participation rates are increasing faster for white than for black women (U.S. Bureau of the Census, 1976: No. 58).

The relationship between age and working appears to be U-shaped; net of birth cohort and business cycle, the labor force participation rate of women falls during their mid-twenties, rises in the mid-thirties, only to fall again in the late fifties (Farkas, 1977). Controlling for ages and number of children, the relationship should be relatively weak, or declining with age. Cohort has a somewhat different effect. Older cohorts are less

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1. Not all women in the labor force are "working". Some are unemployed, looking for work. However, the difference is small enough so as not to affect our overall results, and the terms are used interchangeably in this paper.

likely to work than recent cohorts, net of age and business cycle (Farkas, 1977). Therefore, the overall undifferentiated cohort-age effect on employment is probably a negative one.

The most important situational factor determining the probability of working is the need for income, usually measured by the amount of income from all sources other than from the woman's own earnings (Bowen and Finegan, 1969; Cain, 1978; Crimmins-Gardner and Ewer, 1978; and others). Situational constraints include a recent birth or the presence of a young child, which reduces labor force participation at least until the child enters school (Bowen and Finegan, 1969). Having a young child affects both the taste for work and the potential costs of working (Gronau, 1973; Leibowitz, 1974). Reserachers have found, however, that whether or not a mother works outside the home depends more on her attitude toward the effect of working on the child's development than on the child's age (Crimmins-Gardner and Ewer, 1978). A husband's attitude toward his wife working, as well as the wife's attitude toward working even if her husband objects, has also been found to affect the probability of his wife working outside the home (Spitze and Waite, 1978; Crimmins-Gardner and Ewer, 1978), although there is some question as to whether his attitude is a cause or an effect of her employment (see, for example, Ferber, 1977). School enrollment (Bowen and Finegan, 1969), a recent move (Hill, 1977; Duncan and Perucci, 1976), and a physical limitation or problem (Schultz, 1975, Kushman and Scheffler, 1975) reduce the probability of the wife working outside the home. Those who planned on working at age 35 were less likely to be working during the first few years after high school (Spitze and Waite, 1978).

Labor market characteristics indicate the attractiveness of working outside the home. Labor force participation rates have been found to be higher in areas of higher wages -- in urban, non-southern states -- and where women are more likely to find work -- in areas with low unemployment rates and favorable opportunities for women (Bowen and Finegan, 1969; Cain, 1966).

## High School Experience

As expected, our models explain more of the variance in the employment of females than males. Net of other factors, high school experiences are not very important in explaining employment. Curriculum has no impact at all on the labor force participation of women. Only for black men is there any association: black men who were in a commercial curriculum are less likely to be employed ten years later. Black women and black men who cited sports as their favorite extra-curricular activity are more likely to be employed five years after high school. However, the reverse is true for white men. Black women and black and white men who spent more time in extra-curricular activities were less likely to be employed ten years later. White women and white men who worked in high school were working five years later. White women who spent time in homework are less likely than their peers to be working five years later, net of their marital status and family size. Except for the relationship between employment in high school and employment later on, which is as

expected, the effects of high school experiences on employment are inconsistent and difficult to interpret. Since their effects are small, we conclude that there are no important direct effects.

### Contingencies

Black and white women and white men with greater previous work experience were more likely to be employed three, five and ten years after high school. Being married lowers the probability of white women being employed three and five years after high school, but raises it for black women and white and black men five and ten years after high school. Black and white women with large families are less likely to be working three, five or ten years after high school than those with small families. There is no such effect for men, however. These results are consistent with previous research.

### Background and Other Factors

As expected, men and women in households whose other members bring in substantial income are less likely to work themselves, net of marital status. Being from a family with a higher socioeconomic level is associated with a higher probability of working. Those with health problems are less likely to be employed. Women living in the south or in areas of low unemployment are more likely to be employed. Finally, white men with high abilities who do not later attend college are less likely to be working ten years later than those of lower abilities. The reverse is true for blacks. Presumably, for such men there is another factor (such as motivation) that prevents such men both from attending college and from working.

### School Characteristics

School variables explain a substantial amount of the variance in the employment of black men (about eight percent, with no other variables in the equation) but not for any other group.

## Unemployment

Blacks consistently experience more unemployment than whites and women more than men (Wiley and Harnischfeger, 1980; U.S. Dept. of Commerce, 1980). In a study of out-of-school youth with 15 or fewer years of education, Parnes and Kohen (1976) found that they were unable to account for much of the variation in unemployment experience within race-sex groups. The most important relationship found was between job changing and unemployment; job changing being associated with a higher probability of unemployment for both race and sex groups. Marital status was the only other significant variable: black never-married youth were more likely to have experienced unemployment in the last year and black married women with children were more likely to

have experienced unemployment than childless or single women, while divorced, separated women had the highest unemployment rate (Parnes and Kohen, 1976). Bachman et al. (1978) also found that married men and men with children were less likely to be unemployed. They also found that those who had served in the military were more likely to have experienced unemployment. Finally, Grasso (1975) was unable to find any relationship between unemployment and high school curriculum, although Wiley and Harnischfeger (1980) found that former vocational track students experienced the greatest unemployment during the four years after high school.

Our models of the weeks young men and women are unemployed three, five and ten years after high school are not very good. In most cases they explain under ten percent of the variance. We will summarize the results briefly.

## High School Experience

For black men, being in a college preparatory curriculum reduces unemployment substantially ten years later. White men and black women with positive attitudes toward high school are unemployed fewer weeks three years later. These results are consistent with the motivation hypotheses advanced earlier. However, other results are inconsistent. Young women who reported sports as their favorite extra-curricular activity are unemployed more weeks in the tenth year after high school than their peers, while black men are unemployed fewer weeks five years after high school. Black women who spent more hours in extra-curricular activities experience more unemployment five years after high school, while white men who spent more time in extra-curricular activities experience less unemployment five years later. Surprisingly, black women who receive encouragement from teachers to continue past high school are unemployed more weeks three years later. Finally, black men who worked in high school are unemployed fewer weeks five years later. Because of the inconsistencies we will not make much of these results.

## Contingencies

Being a high school graduate reduces the weeks young white women are unemployed ten years after high school. This result is consistent with other research. Being married reduces the unemployment of black and white men and women three, five, and ten years after high school. For black women, the more children the fewer weeks unemployed ten years after high school. The association between family responsibility and employment is expected for men. For women the relationship may simply reflect the lower employment of married (white) women and white and black women with children.

## Background Variables

For white men and women the higher the incomes of other family members the greater the weeks unemployed ten years after high school.

Although the results are similar, the explanation probably differs by the sex of respondent. That is, the unemployment of the male leads to the wife working, or working more hours, to support the family. In contrast, married white women may be more likely to be unemployed as income rises, because they have greater latitude in seeking employment. White women with greater abilities and from higher socieoeconomic backgrounds, but expecting little parental help in continuing past high school are unemployed fewer weeks five years after high school than their peers. Young white men and young black women from intact families experience less unemployment. White men from an earlier birth cohort experience less unemployment after high school. White men and black women who live in an area of low unemployment or who live in the south experience less unemployment than their peers in the decade after high school. These results are not surprising.

School Characteristics

School variables explain none of the variance in unemployment ten years after high school.

## Annual Hours Employed

Do the same factors that affect the decision to work also affect the number of hours employed people work? Are their effects the same? Researchers have found, as we did, that curriculum is not associated with whether or not a person is working. However, for men and women who were in the labor force, researchers have found that curriculum has an effect on hours worked. Stromsdorfer (1972) reports that graduates of office, trade and industry and distributive programs work a larger percent of the time than academic graduates (net of various controls, including additional education after graduation). Grasso (1978) found that of high school graduates, the former occupational students were more likely to be working full-time than classmates. The percentage of employed women working full-time was highest for white women in "other vocational" programs and for black women in business and office studies (Grasso, 1978). Contingencies are among the most important in predicting hours of work. Married women and women with children under six worked fewer hours, for example (Hofferth et al., 1978). Wiley and Harnischfeger (1980) found that the more hours worked in high school the more hours youth worked four years later.

In the present study we did not limit our analysis of annual hours worked to those who were employed, but included women who were not working as well. The latter of course work zero hours. Thus the work decision and the hours decision are confounded in the analysis. However, by comparing the results with those for employment, we can infer whether they reflect primarily the work decision or whether they reflect the hours decision.

High School Experience

In this research we found that high school experiences affect the

hours youth work. Since their effects on whether or not youth work are small, we inferred that they do, in fact, affect the hours decision. The primary impact is through high school curriculum. Curiculum does not affect whether or not a youth works; however, it does affect the hours they work. Black men who were in a vocational curriculum in high school, black women who were in a commercial curriculum, and white women who were in a college preparatory curriculum worked more hours than their peers ten years after high school. The remainder of the effects of high school experiences on hours are due primarily to their effects on employment. For example, men and women who worked in high school worked more hours five and ten years later. However, since they were also more likely to be employed, their hours would be higher for this reason alone. Black women who spent more hours in homework and fewer hours in extra-curricular activities were more likely to work and worked more hours ten years after high school. White women who cited sports as their favorite extra-curricular activity were less likely to work and worked fewer hours ten years after highschool. Black men who spent more time in homework were less likely to work and worked fewer hours ten years later.

Contingencies

White and black women with more work experience worked more hours three, five, and ten years after high school. We had previously reported them more likely to be employed. The amount of work experience they obtained did not affect the hours men worked, however. Training increased the annual hours white women worked three, five and ten years after high school; however, it decreased the hours white and black men worked three years after high school. This may be because training takes some of the time men would ordinarily be working, while it substitutes for the non-work time of women. Black men and women who graduated from high school worked more five and ten years after high school. Married men are more likely to be employed and they work more hours annually than those who are not married, while married women are less likely to work and work fewer hours than unmarried women. Women with children are less likely to work and work fewer hours three, five and ten years after high school.

Background Variables

The effects of background variables on hours are similar to those on employment. They affect primarily the employment decision. The higher the incomes of other family members the fewer hours men and women worked three, five and ten years after high school. In addition, black women from families of high socioeconomic status worked more hours ten years after high school than those whose family was low in socioeconomic status. Southerners also worked more hours. Other factors affected hours worked but did not affect whether or not a person worked. These affect primarily the hours decision. Black men who know about the world of work work fewer hours ten years after high school. White women and black men with health problems work fewer hours. Black women whose mother worked for pay worked more hours ten years after high school. Black women who lived in a city or in an area

of high unemployment worked more hours.

School Characteristics

The results here too are comparable to those for employment. School variables explain three percent of the variance in annual hours of black men, almost none for other groups.

## Work Experience

Since it is only recently that researchers have begun to collect complete retrospective work histories from their respondents and longitudinal studies have collected enough years of work information, there is little research exploring the determinants of work experience (however, see Mincer and Polachek, 1974; Hill, 1977). It is a more interesting question for women than for men; the latter spend most of their adult lives in the labor force.

Background factors and stable personal characteristics can be expected to be more important in determining the total amount of time a woman spends in the labor force than her situation or environment in any given year. Background variables available in the data include such factors as the socioeconomic status of the parental family, whether the respondent grew up in an urban area or on a farm, and whether that was in the south. The respondent's race and birth cohort have been shown to affect work experience (Hill, 1977).

If greater completed schooling is associated with a higher probability of working in a given year, as was reported earlier, it should also result in greater overall labor force experience (Mincer and Polachek, 1974; Hill, 1977). The number of children born should affect the number of years a woman spends in the labor force (Hill, 1977; Mincer and Polachek, 1974). Besides the number of children, Hill found that their ages affected work experience over the limited period of time he studied. Over a woman's total lifetime, however, the number of children should be the relevant predictor. Whether a woman marries or not has a substantial effect on work experience; never-married women are most likely to have uninterrupted work histories (Mincer and Polachek, 1974).

Thus, we expect early events in a woman's life, such as a first marriage, a first birth, or dropping out of school, to have important effect on total work experience, because of their impact on whether a woman enters or leaves the labor force (see, for example, Hofferth et al., 1978; Cain, 1966). Early work experience may, in fact, be the most important predictor of the probability of working in any given year (see, for example, Heckman, 1978). However, the effect of an early first birth on experience may be indirect, lowering experience only because it increases total family size or decreases the amount of schooling a woman obtains. Hofferth et al. (1978) found age and age at first marriage, but neither age at first birth nor education to predict work experience.

There is some question as to whether experience is the cause or the effect of more children. That is, women who expect to spend more years working may restrict childbearing. Waite and Stolzenberg (1976) found a substantial effect of work plans on fertility expectations and a weak effect of fertility expectations on work plans. However, since our focus is on actual long-run work experience we will consider only the effect of children on that experience. A similar problem is faced when exploring the relationship between wage and experience. Mincer and Polachek (1974) tested the simultaneity of the wage-experience relation for women and concluded that alternative estimation techniques did not significantly affect the results.

## High School Experience

In our study of non-college youth high school curriculum affects the work experience of white women. Those in commercial tracks accumulated more work experience in the first ten years after high school than their peers. Young white women and black men who cited sports as their favorite extra-curricular activity accumulated more work experience than those who did not. As expected, young white women with friends in college and young black women who spent much of their time during high school working accumulated more work experience than those who did not. High school experience does affect the work experience of young men. However, the effects are somewhat unusual. For example, the more positive their attitude toward high school, the less work experience accumulated. Presumably, those who like school are more likely to obtain additional schooling or training, which would reduce their immediate post-high school work experience.

## Contingencies

In our study of non-college youth we found that number of children (but not marriage) is critical to accumulated work experience: the more children the less work experience they obtain. This relationship is stronger for white than for black women. Each additional child reduces work experience ten years after high school by one year for white women, by half a year for black women. High school graduation also affects the work experience of men. Young men who are high school graduates have accumulated less work experience than those who aren't. This makes sense. There is no such relationship for young women, however.

## Background Factors

The effects of background factors are interesting. Youth with higher ability accumulate more years of work experience than those with lesser ability. Women whose mothers worked for pay outside the home while they were growing up accumulated more work experience during the decade after high school than those whose mothers didn't work for pay. Young black women with greater knowledge of the world of work accumulate more work experience than those with less knowledge. However, black women who expected parental help to con-

tinue past high school (but didn't) worked less. Young white men from higher socioeconomic backgrounds accumulate less work experience than those from lower socioeconomic backgrounds. The former may obtain additional training. Finally, white women from the south work more than those from other regions.

School Characteristics

School characteristics explain five percent of the variance in work experience ten years after high school for black women, none for white women or white or black men.

## Summary and Conclusions

High school experiences do affect employment, unemployment, and work experience; however, the effects are not large. Curriculum affects the labor force participation and hours of black men, the unemployment of white men, the hours of black women, and the work experience and hours of white women. Black men in a commercial curriculum are less likely to be employed at all, while those in a vocational curriculum are employed more hours than those in other curricula ten years later. White men in a college preparatory curriculum are less likely to be unemployed ten years later. Black women in a commercial track work more hours ten years later. White women in commercial tracks accumulate more work experience than their peers, while those in a college preparatory track work more hours ten years later. Youth who worked in high school are more likely to be employed, experience less unemployment, and accumulate more work experience during the decade after high school. Young white women and black men who cited sports as their favorite extra-curricular activity accumulate more work experience than those who do not. Young white women who had friends in college accumulate more work experience than those who didn't.

Parental influences are important to later employment and work experience. Youth from families higher in socioeconomic status are more likely to be working and less likely to be unemployed, but they accumulate less work experience than those from lower socioeconomic backgrounds (probably because they are more likely to obtain additional training). Youth in households whose other members bring in substantial income are less likely to work, and experience more unemployment. Women whose mothers work for pay outside the home while growing up accumulate more work experience during the decade after high school than those whose mothers didn't work for pay.

Other factors that affect labor force participation include ability and demographic characteristics. Youth with greater abilities are unemployed fewer weeks and accumulate more work experience during the decade after high school. Those with greater knowledge of the world of work accumulate more work experience than those with less knowledge. Earlier cohorts of men experience less unemployment than do recent cohorts.

Contingencies, experiences after high school, are among the most important to labor force participation and work experience. Married white

women are less likely to be employed, while married black women and married black and white men are more likely to be employed. Women with large families are less likely to be working during the decade after high school. Married men and women and black women with children are less likely to be unemployed during the decade after high school. The greater the number of children the less the work experience black and white women obtain. Young white women who graduate from high school experience less unemployment ten years after high school. Young men who are high school graduates have accumulated less work experience than those who are not. Finally, youth with greater previous work experience were more likely to be employed three, five and ten years after high school.

We found no overwhelming evidence that occupational coursework at the high school level provides youth with preparation for employment. Only for women who were in business and office curricula do high school occupational programs have some later positive effect. Such women accumulate more work experience. In fact, the same factors that are associated with the greater labor market participation of all youth are associated with the greater participation of non-college youth, for example, greater ability, knowledge of the world of work, and high parental socioeconomic status. It is hard to tell from knowing whether or not individuals are working, and from the amount of work experience they have, how well-off they are. More important than labor force participation are the types of occupations in which they are employed and their earnings, the subjects of the next chapter.

## CHAPTER 5: OCCUPATION AND EARNINGS

The most important aspects of labor force position are occupation and earnings. In this chapter we focus on the factors associated with employment in male or female jobs and with the level of hourly wages. We then discuss some of the most important reasons for the wage differences between white men and white women, black women, and black men. Finally, we discuss how the process of occupational determination and earnings attainment differs for black and white men and women, and what the implications are for achieving wage equity between the races and sexes. The relative parts played by high school experience and parental influence is a major issue. The second issue is the similarity or difference between non-college and college youth.

### Sex-Typicality of Occupation

How sex-typical are the occupations in which men and women are employed after leaving high school? Males and females work in highly sex-typical occupations three, five, and ten years after high school, white females in slightly more sex-typical occupations than black females, and white men in slightly more sex-typical occupations than black men. Three years after high school white women are in jobs 74 percent female, black women in jobs 68 percent female, and black and white males in jobs 18 percent female (82 percent male) on the average. There is little change between three and ten years after high school in the sex-typicality of the occupations in which men and women are employed, with the exception of white men, whose average occupation becomes more sex-typical as time goes by. By ten years after high school white women are in occupations 74 percent female, black women in occupations 68 percent female, white males in occupations 13 percent female, and black males in occupations 18 percent female, on the average.

### Factors Affecting Sex-Typicality of Occupation

There is very little research that has focused on the sex-typicality of the occupations in which men and women are employed. Most has centered on the socioeconomic status (Duncan SEI) or the prestige of the job. However, this research is not helpful for our study, since we are interested in the sex-typicality, not the status or prestige of the job (see discussion, Chapter 1). Grasso and Shea (1979) found that in 1972 women were concentrated in stereotypically female occupations. Young white women from "other vocational" programs and general programs were less likely than the average to hold stereotypically female jobs, while graduates of business and office and college preparatory programs were more likely to be in female jobs. Brito and Jusenius (1977) found that young women who were single or had few children were employed in less sex-typical jobs than those who were married or had many children.

Unfortunately, with the variables available to us we were able to

explain only modest amounts (under 20 percent) of the variation (within race-sex groups) in the sex typicality of the jobs individuals hold three, five, and ten years after high school. Since jobs with similar proportions of women are relatively heterogeneous in other ways, there are few causal variables except background factors (e.g., parents' occupations) that seem appropriate. In addition, jobs defined this way differ substantially in the extent to which they constitute a true "occupation", an identifiable type of work with certain well-defined tasks that differ substantially from other types of work. More research is needed to define and improve our occupational definition of "occupation" in the hope of better explaining the occupational choices of men and women.

High School Experiences and Occupation

Several high school experience variables do appear to play a part in the sex-typicality of the occupation a person enters. Net of other factors, black and white women in a vocational curriculum in high school were employed ten years later in occupations with substantially fewer women, i.e., in less female sex-typed occupations, than those in other curricula. The proportion of women in occupations held by black and white vocational graduates was 20 points lower than that of graduates of other curricula. These results confirm our original hypothesis that for non-college women some vocational training leads to non-traditional employment. However, we saw previously (Table 2) that most high school women are in female programs (home economics, clothing). They are not in the trade and industrial programs at all. We will see later on that young non-college women in high school vocational programs actually make less money than their peers in other curricula. Although they are not in the highly female sex-typed occupations, neither are they in the highly-paid male-typed occupations. They are in less desirable and less well-paid female or integrated occupations.

White men and women who cited sports as their favorite extracurricular activity and black men who spent more time in extracurricular activities were in more sex-typical occupations than their peers. These results are interesting; at the time these respondents were in school (the 1960's), participation in sports or other extracurricular activities contributed to sex-typing rather than liberating youth from it. These results suggest that, in the absence of other changes, increases in the participation of men and women in sports, as mandated under Title IX, increase occupational segregation. Of course, women in sports at that time may have been cheerleaders, or in other female sex-typed activities. There is also a positive association (for black women) between homework hours and sex-typicality of the occupation. Both participation in socially desirable activities in high school and being conscientious about homework probably reflect the greater susceptibility of such persons to social influence, since the association between ability and occupational sex-typicality is weak. We would expect such individuals to be in more sex-typical activities than those less easily influenced. That these activities reflect individual susceptibility to social influence is supported by the association for white women and black men between positive attitudes toward high school and employment in more sex-typical occupations three years later, and between teacher encouragement

to continue past high school and employment in a more sex-typical occupation ten years later for black males.

Finally, black women whose favorite subject was math are employed in less female-sex-typed occupations than their peers five years after high school. That is, for women who don't later attend college, liking mathematics and entering less female sex-tyical occupations are associated. This is a hopeful sign, since policy-makers are now focusing their attention on women's achievement in mathematics and science.

## Contingencies

Several factors were found to be significantly associated with the proportion of females in respondent's occupation. Net of other variables, for black and white men, increased work experience is associated with being employed in occupations employing fewer women, i.e., more male sex-typical occupations. For white men and black women, receiving training is associated with being in a sex-typical occupation. Neither marital status nor number of children were found to be associated with the sex typicality of the occupations in which young men and women are employed three, five, and ten years after high school.

## Background Variables

For black men, a higher level of ability, lower other family income, and not growing up on a farm are associated with entering a less sex-typical occupation ten years after high school. For white men, living in a city is associated with being in a less sex-typical occupation ten years after high school. The most interesting background variable, however, is that of parental occupation. The sex-typicality of the occupations of white men are similar to those of their fathers. The more sex-atypical the occupation of his father, the more sex-atypical the occupation of the son, and conversely. This result holds three, five and ten years after high school. Three years after high school the sex-typicality of the occupations of sons are also similar to those of their mothers; that is, the more sex-atypical the occupation of the mother, the more atypical the occupation of the son, for blacks and whites. However, by ten years after high school the association between occupations of mothers and sons have disappeared. Black men's occupations ten years after high school are associated in the opposite manner with fathers' occupations; this may be due to the rapid social change occuring over the period in which these young men grew up. With the civil rights movement in full swing at the time, sons had many more opportunities open to them than their fathers did at the same age.

For white women there is a small positive association ten years after school between mothers' and daughters' occupations ($p<.10$). That is, daughters of mothers with atypical occupations are also likely to have atypical occupations. There does not appear to be an association for black women; again, presumably, because social change occuring at that time increased opportunity for blacks.

The association between parents' and child's occupations for white men and women appear to be same-sex modeling effects (i.e., social learning). Daughters enter occupations similar in sex-typicality to those of mothers, and sons enter occupations similar in sex-typicality to those of fathers. Evidence for opposite-sex parent modeling effects is weaker. For men, the association between the sex-typicality of mothers' and sons' occupations is statistically significant three years after high school, but not later. For women, the associations with sex-typicality of fathers' occupations are in the right direction but not statistically significant at any time point.

School Characteristics

School variables explain four percent of the variance in occupations held ten years after high school for black men, none for the other race-sex groups. Net of other factors, high school variables retain no significant associations with occupation.

## Hourly Wages

How do the wages of young black and white men and women compare? Of those who were employed three years after high school, white men earn the most, black men are next, white women third, and black women are last on hourly earnings. This hierarchy of pay remains the same three, five and ten years after high school. By ten years after high school white males average $5.71 per hour, black males $4.11, white females $3.14, and black females $2.74 per hour. The rate of increase in pay is also unequally distributed, such that the growth of earnings of white men greatly exceeds that of black men, which exceeds that of black and white women.

Factors Associated with Differential Hourly Wages among Youth

Race and sex differentials in wages will be discussed in a later section. Other than race and sex, what factors affect the wages of young men and women. In his study of out-of-school youth with 10 to 15 years of schooling, Grasso and Shea (1979) found no evidence for men of a relationship between occupational studies in high school (vocational or commercial curricula) and later wages. In other work Grasso (1972) did find that white male vocational graduates with post-high school training made more hourly than did white male graduates of other curricula who did not have post-high school training. The same authors (Grasso, 1978; Grasso and Shea, 1979) found that, among females, graduates of business and office and college preparatory curricula were the top hourly wage earners after high school. However, in an earlier study of youth with 15 or fewer years of schooling, Parnes and Kohen (1976) found that vocational graduates, both male and female, made more per hour than graduates of other curricula.

One of the criticisms of most of the current studies of vocational

education is that the amount of time youth spend in vocational versus other courses is not clear. Youth who spend only a small proportion of their total hours in vocational courses and those spending a majority of their hours in such courses are analyzed together. This is an important criticism since in most studies youth who are taking a few vocational courses cannot be distinguished from thse taking a vocational program, except by self-report. Substantial discrepancies have been found between student reports of their high school program and school records of high school program. For this reason, recent work also focuses on hours spent in coursework of either a vocational or an academic type. Wiley and Harnischfeger (1980) found that four years after high school the hourly wage rates of male vocational graduates were slightly higher than those of other students who graduated in the same year from general and academic tracks, although the differences were small. Since this comparison included youth some of whom had just completed college, and whose wage rates were as a result less predictive of later earnings than the wage rates of those who entered the labor force immediately after high school, these results may not reflect their relative future standings. In fact, the same authors found that female academic graduates made as much or more than graduates of other tracks four years after high school. When Wiley and Harnischfeger also explored the effect of the actual number of hours spent in employment and in vocational and academic courses in high school on later labor force participation and earnings, they found the effects to be small and inconsistent. Respondents who worked more hours while in high school and who spent more hours in vocational instruction worked more hours four years later; however, they did not make higher wages. Those who had spent more hours in academic courses worked fewer hours, but, again, there was no effect of hours in such a program on wages four years later.

Education and work experience are the two most important factors associated with hourly wage levels (Mincer, 1974; Bowen and Finnegan, 1969). In our study we have limited the amount of schooling individuals can obtain to 12 years or less; thus whether or not they graduated from high school is our single measure of educational attainment. Work experience is measured by the number of years worked since age 18. Mincer and Polachek (1974) have suggested that for women who have returned to work after a period of absence, besides the number of years of experience, the number of interruptions of that experience affects a woman's wage rate, as does the amount of experience on the current job or with the current employer. Unfortunately, we do not have these measures in the present study. For men, Ornstein (1976) found that the number of jobs held before labor force entry predicted higher hourly wages, as did obtaining the first job after entry directly or by promotion. Military service did not have an impact on the wages of whites but did on the wages of blacks ten years after high school (Ornstein, 1976; Bachman et al., 1978).

A number of other factors have been found to predict wages within race-sex categories. The impact of age on wage appears to be curvilinear; it rises and then declines (Stolzenberg, 1975). The impact of cohort, with which age is entangled, is probably negative. Older cohorts have less education than younger cohorts, in spite of their greater years of experience. The socioeconomic status of the family of origin affects wage rate, net of

education (Ornstein, 1976; Parnes and Kohen, 1976; Bowles and Gintis, 1976; Featherman and Hauser, 1977; Duncan, Featherman and Duncan, 1972). Marital status may also affect the earnings of men and women, raising those of married men, lowering those of married women (Parnes and Kohen, 1976; Ornstein, 1976). Darian (1975) suggested that married women maximize the interest of their job, its hours, location or flexibility of the schedule over the rate of pay. Married men may simply be under more pressure to maximize earnings. However, rather than marital status, the size of family income without the respondent's contribution may be the important factor, capturing the degree of need for the individual to maximize earnings, whether married or not. In addition, the presence of young children could be expected to constrain the ability of a woman to maximize wages, and therefore, lower her wage rate (Hofferth et al., 1978). Beginning a family early could conceivably constrain the earnings of men as well, if it prevented the type of human capital accumulation that would eventually increase earnings. Card (1977) found that males who married and had children early had lower job prestige 11 years after school than those who delayed family formation. Finally, a physical limitation or being enrolled in school may limit the ability of an individual to command a high wage.

High occupational aspirations predicted higher hourly wages for young men but lower hourly wages for young women within the first five years after school (Andrisani et al., 1977). In addition, the hourly wages of young men were not associated with whether they were motivated more by intrinsic or extrinsic job rewards, while those of young women were. Women who were more motivated by intrinsic job rewards, as measured in high school, made lower hourly wages five years later than those motivated by extrinsic rewards (Andrisani et al., 1977).

Grasso and Shea (1979) found that the effect of being in a female-typical occupation on wages varies depending on the level of schooling the woman has completed. For high school dropouts, changing from a job in which 33 percent were female to one in which 66 percent were female implied a drop in wages of $.33. The same change would result in a $.10 drop in the wages of high school graduates, with no significant difference in hourly earnings for those with some college, but less than a degree (the coefficients are -0.01 for less than high school, and -0.003 for high school graduates.) In another study Jusenius (1976-77) found that for women employed in low and medium skill occupations the sex typicality of the occupation significantly affected wages. At the low skill level a woman in a typically female occupation earned 20 percent less than her counterpart in a typically female occupation. At the medium skill level, women in typically female jobs earned 9.5 percent less than women in typically male jobs, net of other factors. There was no difference at the highest skill level.

Characteristics of the local labor market should have an impact on the wage a person can make. Wages are higher in urban as opposed to rural areas, non-southern as opposed to southern states (Statistical Abstract, 1977). Workers may accept lower wages in areas of high unemployment (Ornstein, 1970).

## Occupation and Earnings

In our study we found that three, five, and ten years after high school, individuals, black, white, male, and female, in an occupation with a high proportion of women, i.e., a female sex-typical occupation, earn less per hour than those in an occupation with a low proportion of women. The effect is larger for young men than for young women, and is especially large for young white men ten years after high school. Ten years after high school an increase of thirty percentage points in the proportion female in their occupations results, for white males, in a decline of almost $.60 per hour in hourly wages, compared with a decline of $.27 for black males, $.24 for white females, and $.15 for black females. However, since white males earn the most, the proportionate decline is more comparable by race and sex -- about ten percent.

## High School Experience

As a group, high school experience variables do not explain much of the variance in hourly wages three, five and ten years after high school, controlling for background and ability factors. This is not terribly surprising, since so many other factors intervene (see model, Figure 1). However, several factors are directly associated with a higher or lower hourly wage. Black and white women in a vocational curriculum earn less per hour three, five and ten years after high school (although there are few in that curriculum). White male vocational graduates earn $.46 more per hour than their peers five years after high school; the difference has disappeared by ten years after high school. White female commercial graduates earn more than those in other curricula five years after high school, while white female college preparatory and black female commercial graduates earn more than those in other curricula ten years after high school.

Ten years after high school black men who spent more time on homework earn higher hourly wages than those who spent less time on it. White men who spent more hours in extracurricular activities earn higher wages ten years after high school than those who spent less, as do black women five years after high school. Ten years after high school black women who stated that their favorite extracurricular activity was sports earned $.54 per hour more than those who mentioned other activities or who did not participate in any. Black women who cited math as their favorite subject earned $.50 per hour more in wages than their peers five years after high school, and black girls who liked their high school experience very much earned $.36 per hour more than those who didn't, ten years after high school. Interestingly, ten years after high school, young black women who received teacher encouragement to continue past high school earned lower hourly wages than those who were not so encouraged, net of other factors. Finally, white women who worked in the last year in high school earned higher hourly wages, while black men who did so earned less than their peers who didn't work. Work experience in high school may give young women additional experience and knowledge about work, which is associated with higher wages. In contrast, men obtain a considerable amount of work experience any way; working in high school may simply interfere with the learning process.

## Contingencies

Females, but not males, with greater work experience earn higher hourly wages. Ten years after high school an additional year of work experience increases wages by $.07 for white women, $.05 for black women. Black men and women who received training in the previous year earn higher hourly wages. These relationships are not very strong, probably because we don't have a measure of whether respondents ever received training, only whether they received training last year. Black and white male and female high school graduates earn higher hourly wages three years after high school; by ten years after high school, only black male graduates earn more per hour ($.52).

Are marriage and childbearing a boost or hindrance to the careers of men and women? Here we find, net of other factors, that married men of both races earn higher hourly wages ten years after high school, almost $.75 more per hour, than other men. Number of children has a consistently negative effect on wages. That is, the more children individuals have, the lower their hourly wages ten years after high school. Surprisingly, the effect of children is about the same size for males as for females, about four percent of total wages. Each additional child lowers wages by $.23 for white men, $.15 for black men, and by $.14 for white women. These findings are very important. Although children do not significantly affect the wages of men or women three years after high school, by five and ten years later men and women of both races with a large number of children earn lower wages than those who have few children or none. This study supports of the view that family formation patterns affect the later well-being of young non-college women and men.

## Background Variables

Greater ability is associated with higher wages for both sexes and races five and ten years after high school, but not three years after high school. Presumably, the first jobs individuals take and their early wages are not as associated with ability as are their occupations and wages after the sorting process has been operating for some time. However, net of occupation and ability, knowing about the world of work is associated with a lower wage for white women five and ten years after high school. Knowledge does not pay off for them.

Background factors found by other researchers to predict wages are also found here to contribute. Living in a metropolitan area, not living in the south, having fewer siblings, and having parents whose educational goal for their children is high are all associated with higher hourly wages, for at least one race-sex group. For young white women, the higher the incomes of other family members five years after school, the higher their own wages. For young white men, the higher other family incomes five years after school the lower their own wages.

School Characteristics

Finally, what effect on wages have the characteristics of schools? Ten years after high school the total amount of variation in wages explained by school variables with no other variables in the model (gross contribution) is five percent, two percent, three percent and one percent for white females, black females, white males and black males respectively. These are by no means large. However, they compare favorably with other studies that have found between school differences to explain about three percent of the variance in earnings (See Sewell et al., 1976). In spite of the small additional variance explained, several factors retain their significant association with wages in the full equation. Attending a public rather than a private school is associated with lower wages for white women (by $.61) but with higher wages for black men($1.84) ten years after high school. Of course, the number of white women attending private schools is much higher than the number of black men; in addition, white women may attend private schools for much different reasons than black men. Since parental status is controlled, the difference cannot be attributed to family background differences.

Per pupil expenditure does have a small but statistically significant effect on the hourly wages of young white men and women ten years later. For white men and women ten years after high school, the higher the per pupil expenditure in the school district the student attended, the higher the hourly wages. Each $100 difference in expenditure is associated with a $.07 or $.08 difference in hourly wages, about one to two percent of wages. Finally, ten years after high school, net of per pupil expenditure and other factors, white men do somewhat better in later wages ($.03 per hour) if they were in large classes.

Sex and Race Differences in Wages Ten Years After High School

Race and sex are very important to wage attainment. Ten years after high school the average wages of white women, black women, white men, and black men are $3.14, $2.74, $5.71, and $4.11 respectively.[1] These young people are from similar backgrounds and have similar educational levels; in fact, women are more likely to have completed high school than men. Besides documenting differences in wages three, five and ten years after high school we have examined some of the factors associated with differences in the wages of young men and women who did not subsequently attend college.

To determine the relative effects of different characteristics of young men and women, sex and race differences in the process of early career development, and unknown sex and race effects, such as discrimination, on later earnings, we have turned to a technique called "wage gap analysis". This technique decomposes differences in wages between white men and a comparison group into 1) a differential due to basic characteristics such

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1. 1974 dollars for women; 1975 dollars for men.

as ability, 2) that due to acquired characteristics such as occupation and work experience, and 3) that due to differences in returns to the individual for these characteristics, "discrimination", and an unexplained residual. The wage equations used, simplified versions of those reported in the last section, appear in the Appendix.

White Men versus White Women

Of the total wage difference between white men and white women, none is due to differences in characteristics. About 46 percent is due to differences in occupations (occupational segregation), 54 percent is accounted for by discrimination as well as by other factors not included in the model. The (geometric) mean of white males' wages is $5.26 per hour that of white women is $2.89 per hour.[1] The difference ($2.37) is not affected at all by assigning to women the basic characteristics (socio-economic background, ability, etc.) of men. In contrast, if women were to keep their own characteristics but were given white men's wage equations (i.e., direct discrimination were eliminated), the difference in wages would be reduced to $1.09. That is, women's wages would rise to $4.17 per hour. If, in addition, occupational segregation were eliminated (i.e., differences in the occupational distributions of men and women were eliminated) men's and women's wages would be equal.

White Men versus Black Men

A full 70 percent of the differential between white men and black men is due to differences in characteristics such as family background and environment, with only 30 percent remaining unexplained.[2] The (geometric) mean of white men's wages is $5.26 per hour; that of black males is $3.82 per hour. If black males had the characteristics of white males, but kept their own wage equation, their wages would rise to $4.83 per hour. If black males kept their own characteristics but were given the wage equation of white males (e.g., discrimination were ended) their wages would rise to $4.25 per hour. Although wage discrimination is still burdensome for black males, perhaps it is now time to turn our attention to the substantial disadvantages blacks suffer by reason of birth and early environment (which may also be the results of past and current discrimination which limits the education and incomes of parents).

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1. Due to the semilogarithm specification of the wage equations, the use of the geometric mean hourly rate of pay (the antilogarithm of the mean of the natural logarithm of the wage) is more appropriate than the arithmetic mean.

2. This residual, as in previous analyses, may be attributed to labor market discrimination, lack of information about opportunities, "preferences", omitted variables, and to measurement error.

## The Attainment Process of Young Non-College Men and Women

One problem with undertaking a wage gap analysis of the sort just described is that it is difficult to pinpoint the factors that cause the difference between men and women in wages when the process differs between the sexes. For example, work experience is associated with the wages of women, but not those of men, presumably because there is less variation in the work experience of men. Men gain more from high school graduation than do women; however, more of the latter graduate. Finally, women are affected more strongly by marriage and by children than are men. These differences are especially important since such a large proportion of the difference in earnings is unexplained.

Within the different race-sex groups there is substantial variation in wages. Sex segregation is one of the main causes of differential wages between men and women, and sex-typing of the occupation is one cause of differential wages for individuals. Young men and women, black and white, who move into a job with ten percent fewer women can expect an increase of two to three percent in their hourly wages. What are the other factors associated with wage differences among women, among men? What is the process by which high school experiences affect later attainments of men and women, black and white?

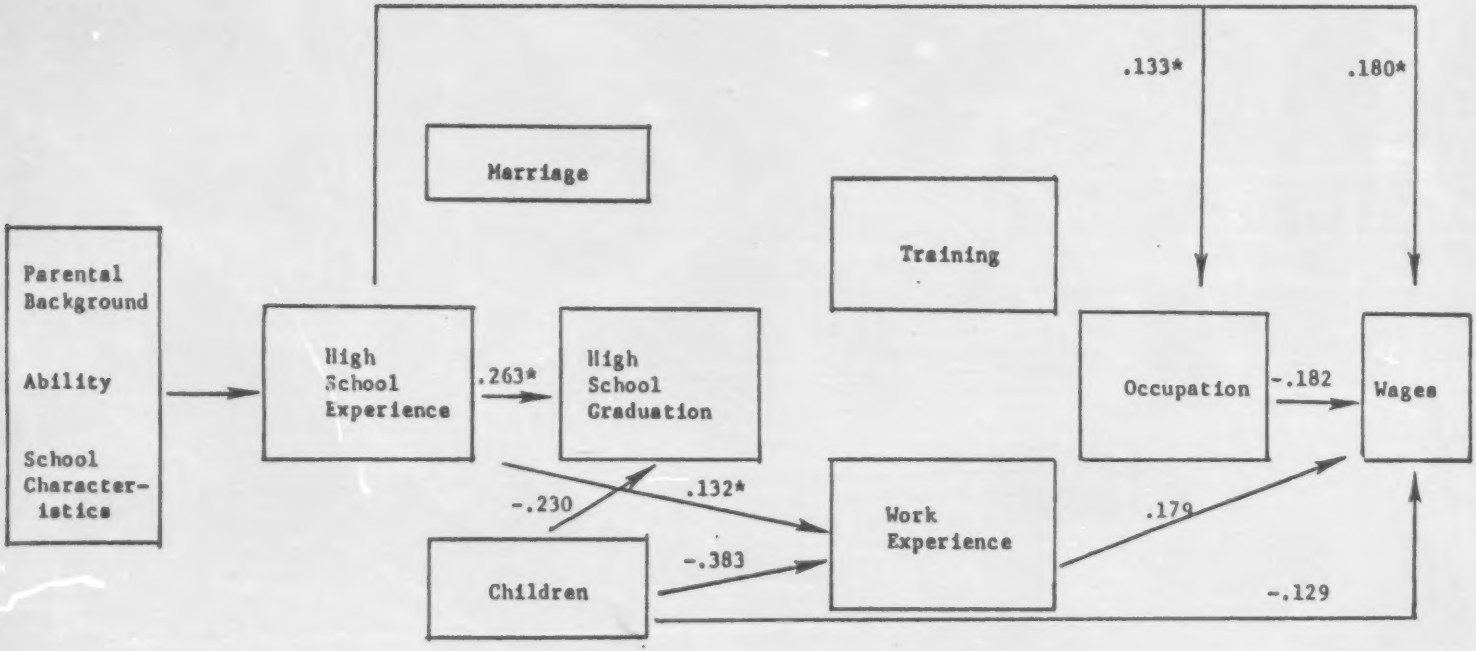
In Figures 4-7 we have diagrammed the process by which early experiences affect the later attainments of non-college men and women, black and white. We will focus on the effects of high school experiences on wages ten years later; the effects of other variables on wages are summarized briefly. As we can see in the figures, high school experiences affect the wages of young men and women ten years after school in a number of different ways. To estimate the various sizes of these effects and their over-all impact on young men and women we have developed a causal or path model. This technique enables us to examine indirect as well as direct effects. Even if high school experiences do not directly affect the later wages of youth, they may do so indirectly, through their effects on marriage, children, high school graduation, training, work experience, and the sex-typicality (proportion female) of individuals' occupations. These results are summarized in Table 8.

### High School Experience and Wages

Net of background, environment, ability, and school characteristics, the effects of high school experience on wages ten years after high school are statistically significant. With all variables in the model, the size of the effect ranges from 1 percent to 25 percent of total wages, depending on the specific high school experience. The direct affects of high school experience on wages are the most important, accounting for from 50 to 80 percent of the total effect of high school experience (Table 8).

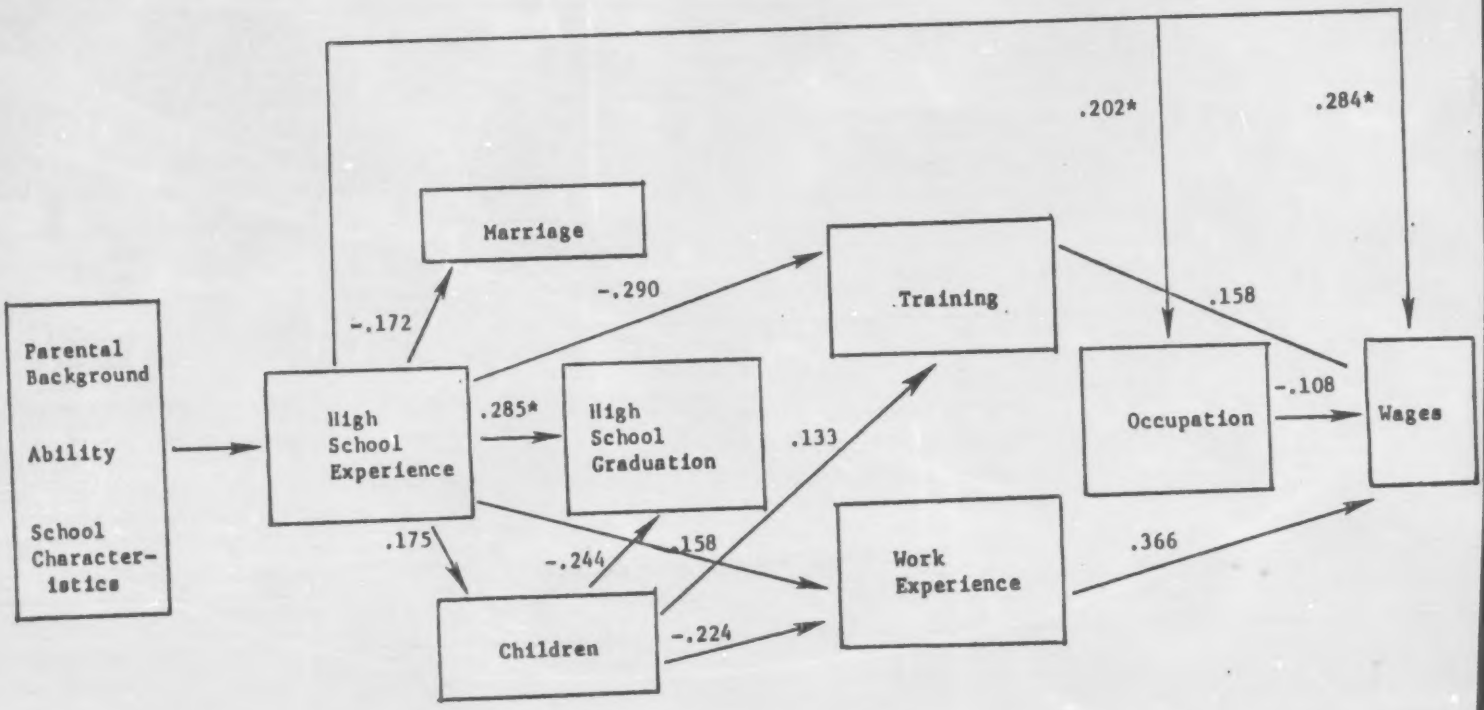
Young white women who worked in high school have higher wages ten years later, while young black men who worked have lower wages ten years later than their peers who didn't work. Young white women who work in high

Figure 4: Path Model of the Attainments of Young Non-College White Women Ten Years After High School, Standardized Coefficients



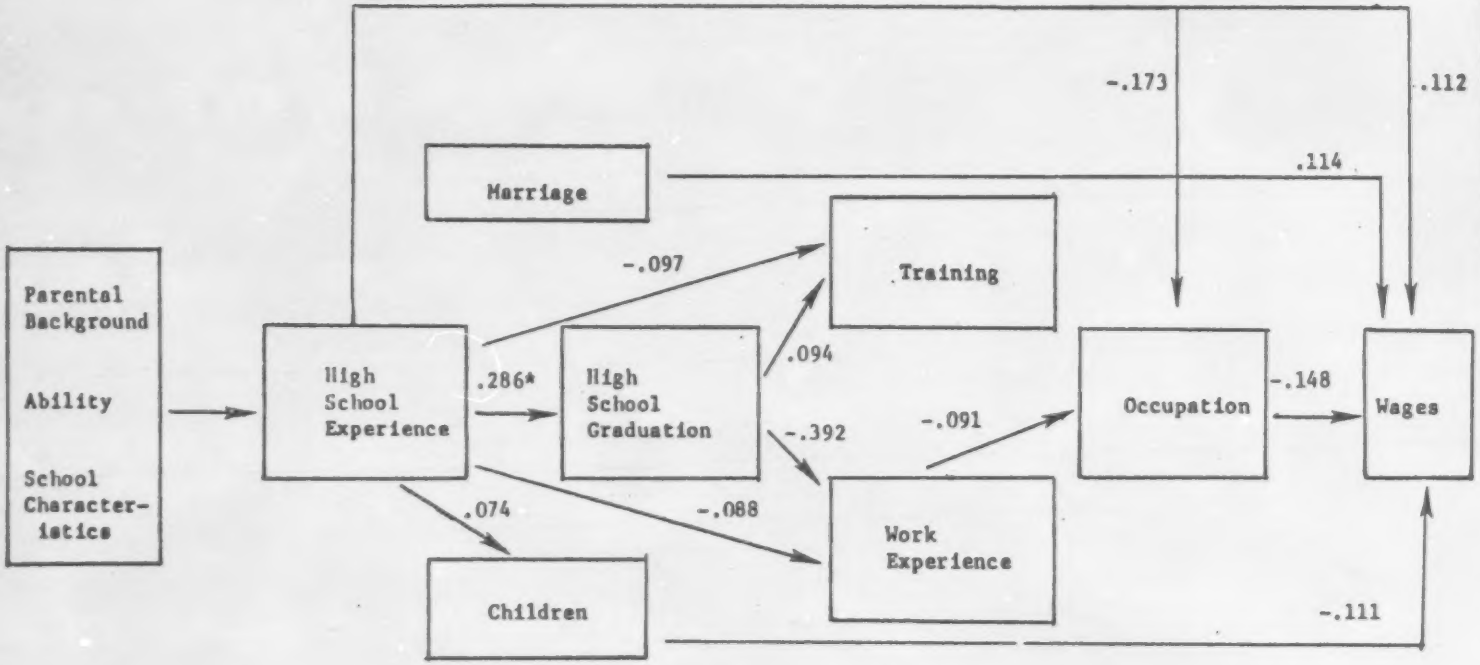

*Sheaf Coefficient (Heise, 1972).

Figure 5: Path Model of the Attainments of Young Non-College Black Women Ten Years After High School, Standardized Coefficients



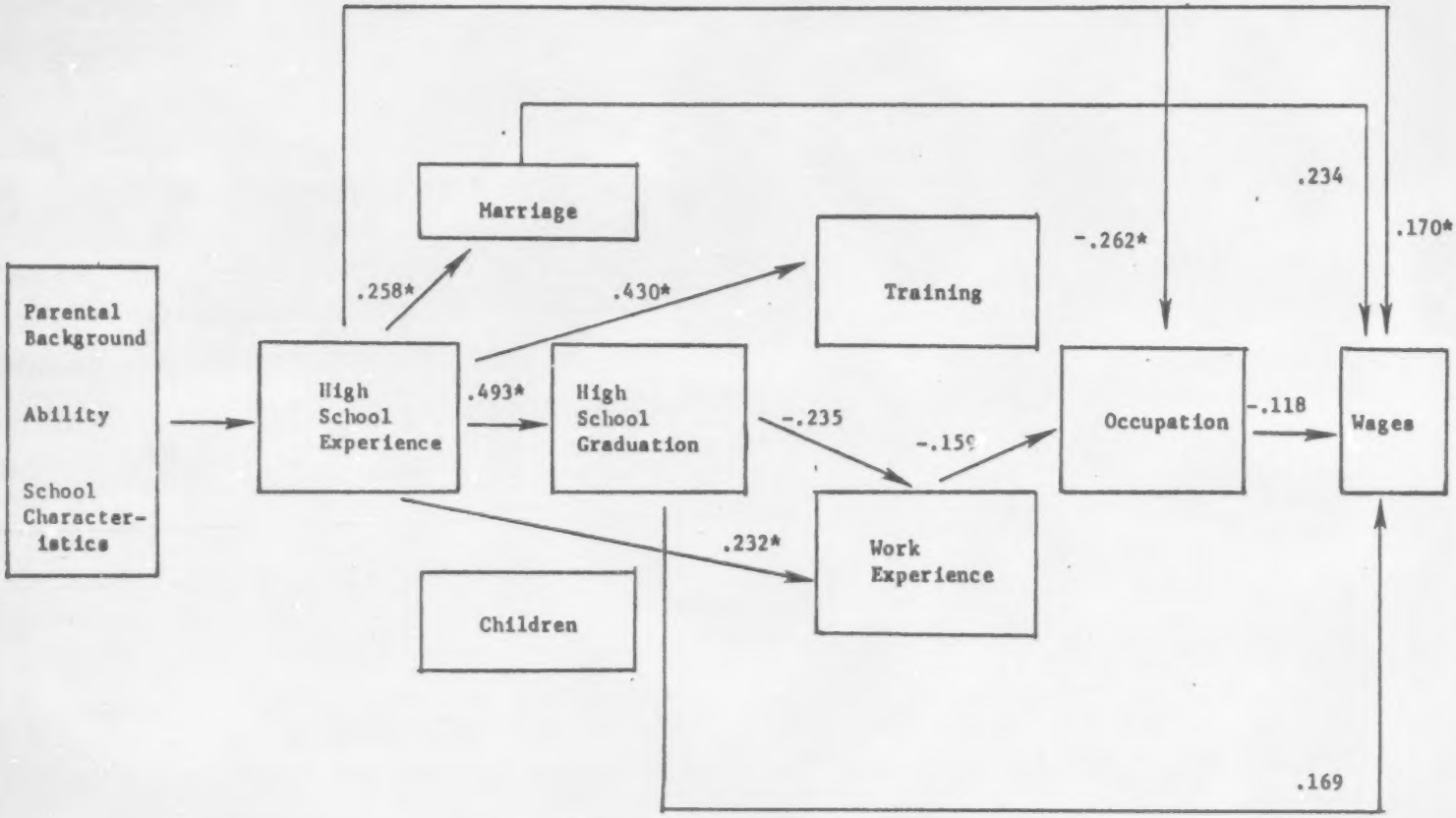

*Sheaf Coefficient (Heise, 1972).

Figure 6: Path Model of the Attainments of Young Non-College White Men Ten Years After High School, Standardized Coefficients




*Sheaf Coefficient (Heise, 1972).

Figure 7: Path Model of the Attainments of Young Non-College Black Men Ten Years After High School, Standardized Coefficients




*Sheaf Coefficient (Heise, 1972).

Table 8: Total, Direct, and Indirect Effects of High School Experience on Wages Ten Years After High School, Standardized Coefficients, by Race and Sex

| | Total Effect | Indirect Effect Through | | | | | | Direct Effect |
|---|---|---|---|---|---|---|---|---|
| | | Marriage | Children | Graduation | Training | Work Experience | Occupation | |
| White Women | .180[a] | 0 | 0 | 0 | 0 | .024 | -.024 | .180 |
| % | 100[b] | | | | | 10 | 10 | 80 |
| Black Women | .260 | 0 | -.014 | 0 | -.046 | .058 | -.022 | .284 |
| % | 100 | | 3 | | 11 | 14 | 5 | 67 |
| White Men | .127 | 0 | -.008 | -.002 | 0 | -.001 | .026 | .112 |
| % | 100 | | 5 | 1 | 0 | 0.6 | 17 | 75 |
| Black Men | .346 | .060 | 0 | .081 | 0 | .004 | .031 | .170 |
| % | 100 | 17 | | 23 | | 1 | 9 | 49 |

[a] The sum of the (signed) direct and indirect effects.

[b] Based on the sum of the absolute values of the direct and indirect effects.

school do not work as many hours; working is probably a positive experience, introducing them to the working world, but not interfering with their studies. Young men, in contrast, work more hours, probably to the detriment of their schoolwork. Other research has indicated that working while in high school can be harmful if too much time and effort goes into it.

Young black women with a positive attitude toward their high school experience and young black men who spent more time in homework make higher wages ten years later than their peers. Such variables are probably indicators of motivation, which does pay off in wages ten years after high school. A surprising result is that black women who report that they received teacher encouragement to continue past high school received lower wages ten years later than those who did not receive such encouragement, net of factors such as whether they were receiving training. Such young women might perceive their lack of higher education as failure, doing worse as a result. Alternatively, the same motivational factors that impeded their going to college might have reduced their job motivation.

Participation in high school extracurricular activities, especially sports, is advantageous in terms of later wages for black males and females, relative to their peers, but not for white females. At the time (1960's), participation in such activities was an important way for black youth to excell, given their relative disadvantage in socioeconomic background and in test performance.

High school curriculum is associated with wage differences ten years later only for women. White women who were in a college preparatory track in high school make higher wages ten years later than those in a general track, while those in a vocational curriculum make lower wages. Black women who were in a commercial curriculum have higher wages than those in other curricula ten years later. As pointed out previously, females in vocational programs are in female programs, not trade programs. Such programs are likely to be associated with receiving lower wages ten years later, controlling for the sex-typicality of the occupation in which women are employed.[1] Young women in a college preparatory curriculum are the most highly motivated of all these young women (for example, they had the most positive response to their high school experience). Therefore, it is not surprising that they have the highest wages (net of ability). Young black women in a commercial curriculum, a female-typical, but vocationally oriented program, do better than the black women in other curricula.

School experiences also indirectly affect the later well-being of youth through their impact on those factors affecting wages: occupational choices, work experience, training, high school graduation, children, and marriage (see Figures 4-7). The effect of high school experience through the sex-typing of the occupation is one of the most important indirect

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1. Women in vocational curricula were in less female sex-typical occupations, which are usually associated with higher wages (see p. 3).

effects for men and women of both races; it is slightly more important for whites than for blacks. High school experiences affect wages because they affect the sex-typicality of the occupations in which such young men and women are employed ten years later. Between 5 and 17 percent (depending on race and sex) of the total effect of high school experience is due to indirect effects through occupation (Table 8).

High school experience also operates indirectly through the work experience of young black and white men and women. These effects are strongest for young women, amounting to 10 to 14 percent of the total effect of high school experience on wages (Table 8). The amount of variation in the work experience of young men does not directly affect wages; it affects wages only indirectly, by affecting the sex-typicality of their occupations (Figures 6-7).

Finally, there are small indirect effects of high school experiences on wages through number of children (black women and white men), through marriage (black men), through training (black women) and through high school graduation (white men and black men) (Table 8 and Figures 4-7).

School Characteristics and Wages

The characteristics of schools make statistically significant but small contributions to the later wages of black and white men and women. Since their effects are difficult to interpret, they are not reported here.

Parental Background and Wages

Parents have substantial influence over the later well-being of their children. In our non-college sample, the effect of the socioeconomic status of the family is not as important as it is for all youth, including youth who continue past college. However, black males from higher status backgrounds do obtain higher wages later on, net of all other factors. The higher the goal of parents for the education of their white daughter, the higher the daughter's wages ten years later. Having a foreign-born parent is, for black women, associated with higher wages ten years after high school. Having a large number of brothers and sisters is associated with lower wages for black and white women, but not men, ten years later.

The major influence of parents is indirect. One of the most interesting effects of parents operates through their occupations. In general, young white men and women aspire to and enter occupations similar in degree of sex-typing to that of their same sex parent. In high school there is an association between occupation desired at age 30/35 and the occupation of the same sex parent; once out of school there is an association between actual occupation and the occupation of the same sex parent. The later association is stronger. Although the mechanism through which parents affect the choices of their children (modeling versus reward and punishment, for example) is not apparent in these data, these results suggest that any program of social change will not be effective without

attention to the families from which these young people come. Affirmative action programs to reduce occupational segregation will have substantial indirect effects, the results suggest.

Young women (black and white) with mothers who worked for pay accumulate more work experience by ten years after high school than those with mothers who did not work for pay. Greater work experience is associated with higher wages for women. However, white women whose mothers worked for pay also have more children, which reduces work experience and wages. Higher socioeconomic status is associated with a greater chance of graduating from high school for white men and women; however, only for white men does this result in increased wages (for young women graduation from high school has no wage payoff). For black women the higher parents' educational goal for thier daughter, the higher her chance of receiving training last year, which is associated with higher wages. In contrast, white women whose parents' educational goal was high have more children, which lowers wages. For white men the higher parents' educational goal the more likely they are to graduate; however, for both white and black men, receiving parental help and encouragement to continue past high school are associated with a reduced chance of graduation. White women from large families bear more children themselves, which lowers work experience and later wages.

## Other Factors and Wages

For white women, white men, and black men, higher ability is associated with higher wages ten years after high school; for black women, in contrast, higher ability is associated with lower wages. Black women with higher abilities do gain more work experience than their peers, which is associated with higher wages. White men with greater ability are more likely to graduate from high school than their peers, which is associated with higher wages. Black men with greater ability are likely to have less male sex-typed occupations ten years later than those with less ability, which does lower their wages somewhat.

Recent birth cohorts of young people are more likely than early birth cohorts to have graduated from high school (white men, white women, and black men) and to have fewer children (white men, white women, and black men), which is congruent with data from other sources. Graduation increases wages for men. Having fewer children is associated with increased wages for white men and women. Living in the south is associated with lower wages for all race-sex groups. It is associated with greater work experience for white women and with fewer children; both are associated with higher pay. Living in the south, however, reduces the chances that young men will graduate from high school, thus reducing their wages ten years later. Living in a city raises the wages of white women and black men. White men living in cities work at less sex-typed occupations. Finally, living in an area with high unemployment is associated with higher wages for white and black men. However, it is also associated with a lower chance of being married, and, as a result, a lower wage for men.

## Sex Differences in the Process of Wage Attainment

The similarities between the races in the attainment process are larger than those between the sexes. For both sexes and races, high school experiences affect high school graduation, they affect the sex-typicality of the occupation youth obtain, and they directly affect the wage they earn ten years later. In addition, for both races and sexes, the sex-typicality of the occupation a person holds directly affects the level of wages. Female sex-typical jobs pay less than male sex-typical jobs, net of other factors such as work experience and whether completed high school. However, the specific ways that high school experiences affect later labor force outcomes depend on the sex of the person. The same factor has opposite effects on young men and young women. For example, white men who cited sports as their favorite extracurricular activity were in more male sex-typical occupations ten years later, while females who cited sports as their favorite extracurricular activity were in female sex-typical occupations. We interpreted these activities as reflecting individual susceptibility to social influence, an interpretation which is supported by the association among white women and black men between positive attitudes toward high school and employment in more sex-typical occupations three years later. The extreme differences between the sexes, and at young ages, suggest that altering current sex-segregated occupational patterns would be extremely difficult. However, we also found that although the contribution of sex-typicality of the occupation to wages is substantial, similar by sex and race, and a major contributor to wage differences, it is not the only factor. Other factors were found to be important, and a substantial proportion of wages and wage differences was not explained.

Men and women also differ in the effects of work experience and high school graduation on later wage attainment. Completing high school directly affects the wages of men but not women. Work experience directly affects the wages of women, but not of men. However, since work experience affects the sex-typicality of the occupations men hold, it indirectly affects their wages. Work experience does not affect the sex-typicality of the occupations women hold. By gaining more work experience, the wages women earn should rise, however, they will not necessarily enter less sex-typical jobs. Men who gain more work experience enter more male typed jobs, and make more per hour as a result. Finally, marriage directly affects the wages of men, but not women, while children affect the wages of women indirectly (through reduced work experience).

## Race Differences in the Process of Wage Attainment

Results of the wage-gap analysis indicate that the primary difference between black and white males lies in their family background characteristics. Differences in family background explained 70 percent of the wage differential. In fact, there was evidence that, net of family background, returns to blacks for their characteristics are higher than for white men. From the examination of the process of wage attainment we see that there are few differences between white and black men and between white and black women in the attainment process. The only differences we

found were 1) that children directly affect the wages of white men and women but not black men and women and 2) high school experiences affect how soon black men and women, but not white men, marry after high school.

## Summary and Conclusions

High school experiences do have significant direct and indirect effects on the later occupations in which young men and women are employed and on their wages. However, the impact of these experiences on the occupation and wages of non-college youth does not appear to differ from the effect they have on their college-attending peers. Among non-college women, those in a vocational curriculum in high school were employed ten years later in occupations with substantially fewer women, i.e., less sex-typical occupations, than those in other curricula. However, although there is a strong effect of occupations on wages, with those in male typical occupations earning more, in this particular case, female vocational graduates in non-traditional jobs earn less than their peers. In fact, ten years after high school women in college preparatory curricula were the top earners among women. Female vocational graduates are not employed in the highly female-sex-typed occupations; neither are they employed in the high paid male-dominated occupations. Of course, at the time they were in high school women in vocational programs were in female programs. Since then more and more women are entering traditionally male vocational programs in high school, so that the relationship between vocational training and later occupations and wages may differ substantially today.

The other high school variables associated with sex-typicality of occupations and wages appear to reflect motivation, conformity, or susceptibility to social influence rather than technical preparation for one type of employment or another. For example, those who cited sports as favorite extracurricular activity, those who spent time in extracurricular activities, those who spent time on homework, who had positive attitudes toward high school and who received teacher encouragement to continue past high school were all more likely to be employed in sex-typical occupations ten years later. Other high school variables that reflect actual work preparation include liking math and working. Black women who cited math as their favorite subject earned more. This is hopeful, since math competence is an increasing focus of educators. Finally, women who worked in high school made higher hourly wages, while black men who worked made less than their peers who didn't work. We hypothesized that work experience in high school may give young women additional experience and knowledge about work. In contrast, men obtain a considerable amount of work experience any way; working long hours in high school may simply interfere with the learning process. This finding is relevant for those involved in work-study programs for teenagers.

Family background factors are very important to later occupations and wages, even controlling for high school and post-school experiences. The sex-typing of the occupations of parents is strongly associated with

those their children aspire to and eventually enter. Parental encouragement to continue past high school is also associated with higher hourly wages, net of other factors.

Of course, race and sex are very important in determining wages. To determine the relative effects of different characteristics of young men and women, sex and race differences in the process of early career development and unknown sex and race effects, such as discrimination, on later earnings we carried out a wage-gap analysis. We found that there are no differences between white men and women in basic characteristics that might lead to wage differences. Forty-six percent of the difference in wages is attributable to occupational segregation with the remainder attributable to outright discrimination in the labor market and to other factors not included in the model. In contrast, 70 percent of the difference between white and black men is attributible to differences in basic characteristics, only 30 percent of the difference is attributible to discrimination and other factors.

The importance of occupational segregation led us to focus more on the process of occupational and wage attainment of men and women. School experiences not only affect wages directly, they also indirectly affect the later well-being of youth through their impact on other factors that affect wages: occupational choices, work experience, training, high school graduation, marriage and children. The effect of high school experience on wages through the sex-typing of the occupation is one of the most important indirect effects on wages for men and women of both races. That is, high school experiences affect wages because they affect the sex-typicality of the occupations in which such young men and women are employed ten years later.

The major influence of parents is indirect. Again, one of the most interesting effects of parents operates through their occupations. In general, young white men and women aspire to and enter occupations similar in degree of sex-typing to that of their same-sex parent. Although the mechanism through which parents affect the choices of their children (modeling versus reward and punishment, for example) is not apparent in these data, these results suggest that any program of social change will not be effective without attention to the families from which these young people come.

## CHAPTER 6: SUMMARY AND CONCLUSIONS

### What Did We Do?

Our goal in this research was to answer the following three questions:

1. How do youth develop their educational and occupational goals and aspirations and select their high school curriculum? Is curriculum selected on the basis of ascribed characteristics such as sex, race, and social class, or on the basis of personal preferences?

2. What part do high school experiences play in determining the later labor force outcomes (occupations and earnings) of young men and women, relative to the part played by parents and post-high school experiences?

3. How does the process of occupational and wage attainment differ by sex and race? Are there substantial differences between college-bound and non-college-bound youth?

To address these questions we analyzed data from the National Longitudinal Surveys of the Labor Force Experiences of Young Men and Women, which were designed by the Center for Human Resource Research at Ohio State University and conducted by the U.S. Bureau of the Census. The study surveyed some 5,000 young men who were 14 to 24 in 1966 and 5,000 young women who were 14 to 24 in 1968, the initial years of the surveys. These youth were then interviewed in succeeding years on a regular basis. Information on them was available through 1975 for young men and women, providing nine years of data for men and seven years for women. The sample includes both World War II and post-World War II baby-boom cohorts, with more of the latter than the former. This is important to consider as we review our results. Most of these youth graduated from high school during the early and later 1960's; thus their high school years occurred during a period of intense civil rights activity. This activity focused primarily on race, although interest and lobbying for sex equity developed. For example, the Equal Pay Act (1963) and Title VII of the Civil Rights Act (1964) were passed during this period. However, major sex equity legislation (The 1972 Amendments to Title VII of the Civil Rights Act and Title IX of the Education Amendments, also passed in 1972) was passed and its implementation strengthened after these youths had already graduated from high school. Thus their high school years were less affected by the increased concern with sex equity than following cohorts. Although several results may no longer hold true today for current high school students, for example, those in the area of sports[1], in general, we do not expect the relationships we

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1. Substantial proportions of women are now active in high school inter-scholastic athletics, see PEER, 1979.

describe to have changed measurably. A few more young women are entering male vocational courses in high school, and a few more enter male-typed jobs after high school. However, the factors that lead an individual to enter a male- or female-typed course or occupation are expected to be similar.

For our analyses we selected a subsample of youth who had completed no more than 12 years of formal schooling, that is, no college, by the last year the survey was conducted. For the majority of the sample this point occurred at least five years after leaving high school. Only a small additional proportion will eventually complete more schooling. In order to compare our results with those on all youth, including college attenders, we obtained from other surveys published information on comparable cohorts of youth, and we obtained from our review of the literature descriptions of the relationships obtained in those samples. Throughout, we have drawn on these data for comparison. In most cases published information on all youth from the National Longitudinal Surveys was available; thus our comparisons are based in many cases on data from the larger sample of which ours is a small part.

One of the problems with generalizing from data from longitudinal studies is that simply not enough time has passed to determine whether early events have stable and long term impacts. A second problem is that time periods are often not defined carefully enough so that accurate comparisons can be made with other samples of youth. As a result we defined five time points with reference to respondents' grade in school or, if out of school, with reference to the year in which they would have been in grade 12 if they had graduated with their high school class. The lives of youth are captured at the following points: grade 9, grade 12, and at ages 21, 23, and 27, approximately three, five, and ten years after high school, respectively. This approach was taken to make the data comparable to studies such as the National Longitudinal Survey of the High School Class of 1972, which interviewed a grade cohort. Data from each individual is obtained at each time point. Not all individuals will be in the sample at all time points, but most are in for at least two such points. Since this may present problems of comparability, when we analyze changes over two time points our samples are restricted to only those youth in the sample at both points.

## What Did We Learn?

Young men and women appear to develop along completely separate life tracks. The pattern is not one of similar development up to a point followed by gradual divergence. The enormous gap between the life courses of men and women begins much earlier than grade nine. The consequences are serious. Census data show that women who work full-time, full-year earn 60 percent of what men earn. The present analysis shows that sex differences in occupational distribution contribute to wage differences between men and women. We found no differences between white men and white women in such basic characteristics as family background, ability, health, and residence that might lead to wage differences. Forty-six percent of the sex difference in wages is

attributable to occupational differences. The remainder of the difference in wages, 54 percent, was unexplained, and is attributable to other factors that we could not measure. These include outright discrimination in the labor force as well as omitted variables such as job tenure, weeks and hours worked in the last year, preferences, and measurement error. In contrast, 70 percent of the difference between the wages of white and black men is attributable to differences in basic characteristics; only 30 percent of the difference is attributable to discrimination and other factors.

In this study we focused on events and circumstances prior to labor force entry that contribute to occupational segregation. The main difference between the sexes in the high school years lies in their different occupational aspirations and curriculum choices. There is little difference in educational aspirations in terms of years of schooling desired. What factors in the high school experience lead to different occupational choices by young men and women and thus to occupational segregation and differential wages? Differences between the choices of young men and women in high school are primarily due to differences in aspirations and goals predating entry into high school rather than to specific developments during their high school years. In this sample of non-college youth, teachers were found to have little direct influence on aspirations and curriculum selection, compared with the effects of family background, individual ability, and sex. Peers exert some influence, through their ambitions and goals. Parental education and encouragement of their children to continue past high school affect their children's aspirations and choices. However, more important is the type of occupation in which parents are employed. The sex-typicality of the occupations of parents affects the sex-typicality of the aspirations of their children, with the influence of the same sex parent playing the most important part.[1] Although preferences play a part, they themselves are determined by sex and social class. Other researchers have described this as a process of values transmission from parents to children.

High school experiences do affect the post high school choices of young men and women, especially the work experience they obtain, the occupations they enter, and the hourly wages they earn. One general conclusion from the study is that high school experiences play an important part in the later achievements of youth. However, this part consists primarily of reinforcing values, goals, and aspirations, most of which develop prior to high school, rather than in providing students with skills or other qualities they don't already have. Schools do not seem to instill work values, goals and aspirations in those who do not have them. Those with high motivation, high ability, who spend time in homework, who like high school, and who take academic courses, will receive higher wages a decade later than their less-motivated peers, even though neither group attends college. Those with low motivation and lesser abilities are not helped by high school. They take dull courses with less concerned teachers and are less well-off as a result.

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1. Whether or not the mother worked was important primarily to her daughter's work experience. Young women whose mothers worked when they were 14 worked more years themselves.

Besides reinforcing general and work-related values of parents and society, schools also reinforce sex-typed values. There is a close relationship between the attitudes and values that schools reward and sex-typed aspirations and outcomes. Individuals who have internalized the work norms of society are likely to accept and follow the sex-role norms as well. The relationship found in this study of non-college youth between high motivation and highly sex-typed occupational aspirations illustrates the point. Unfortunately, this implies that reducing occupational segregation by sex even a small amount requires increasing the separation between work-related and sex-typed attitudes and values, no small task.

Will encouraging young women who would not later enter college to take male sex-typed vocational courses in high school or to enter vocational training after leaving school result in their entering less sex-typed occupations? We did find that participation in vocational courses was associated with working in slightly less sex-typed occupations later on. However, such women did not earn higher wages than their peers in other curricula. At the time the survey was conducted, vocational courses for females meant female-typed programs such as homemaking. Thus we can present no evidence for whether or not participation in male-typed vocational programs in the industrial or technical field will lead young women into less traditional occupations or otherwise improve their labor force outcomes.

Participation in sports or other extra-curricular activities affects the later life chances of youth; however, the overall effects are similar to those of other experiences reflecting increased motivation and integration with school societal norms and values. For example, net of other factors, men who spent more hours in extra-curricular activities were more likely to graduate from high school, which increases their wages later on. Black males and females who participated in high school extra-curricular activities earned more after high school than their peers. However, white men and women who cited sports as their favorite extra-curricular activity and black men who spent more time in extra-curricular activities were in more highly sex-typed occupations than their peers. Of course, these are extremely crude measures of participation in sports and other activities. In addition, women now participate in a wide variety of sports and to a much greater extent than in the past, and these relationships may no longer be the same. Since a large part of Title IX is concerned with equalizing the opportunities of men and women to participate in extra-curricular activities such as sports, a close look should be paid to the meaning of these activities in high school, to who participates, and to the part these activities play in the later lives of young men and women.

Is there evidence for any direct translatability of high school skills or experiences to later life? We found some hopeful results. For example, young non-college black women who cited math as their favorite subject entered less sex-typical occupations in the decade following high school than those who mentioned other subjects. Their wages are higher as a result. Programs to increase the competence of women in mathematics, a major policy concern of educators and those in the scientific community, can be expected to improve the position of non-college-bound women as well as the college-bound. The evidence for the benefits of work experience while in high school are mixed.

For example, young women who worked while in high school make higher wages, net of other factors, than those who did not, while young black men who worked while in high school make less than their non-working peers. Since such women also work fewer hours than men, we interpret these findings (supported by the results of other researchers) as suggesting that work is positive only if it does not take so much time and energy as to interfere with school-work. Policy-makers interested in work-study programs for teenagers, for example, should adjust their programs accordingly.

We found support for our hypothesis of the differential effects of tracks; however, the results are opposite to those predicted. Even if they do not later attend college, youth who were in a college preparatory track in high school earn more ten years after high school than those in other tracks. We had hypothesized that, for non-college youth, vocational programs would be associated with earning more ten years after school. Because the effect might vary over time, we looked at youth three, five, and ten years after high school. Three years after high school, young white men in vocational programs in high school make more per hour than their peers who had been in a general curriculum. However, that effect disappears by the fifth year after high school and does not reappear. The high school curriculum of black men does not affect their wages. Although high school curriculum does not affect the wages of black or white women three years after school, by five years later white women in commercial programs earn wages higher than those in a general curriculum, while those in a vocational curriculum earn less. Ten years after high school the effect of commercial programs has disappeared for white women; it appears for black women, who earn more ten years after high school than those who were in a general curriculum. However, at that point, young white women who were in a college preparatory curriculum in high school are earning more than their peers who were in other curricula, while those who were in vocational programs continue to earn less.

We found some evidence that occupational students, men in vocational programs and women in commercial programs,, are more likely to finish high school than students who were in other curricula. Net of family background and other factors, white men in vocational curricula are more likely to have graduated from high school three and five years later, which is associated with higher earnings. This effect is transitory; it has disappeared by ten years after high school. White women in commercial curricula are more likely to have graduated ten years later. However, since high school graduation is not associated with later labor force outcomes for women, commercial programs for women do not even indirectly increase their wages through this path.

We conclude that, controlling for a number of other factors such as family background and ability, occupational training in the high school does have <u>short term</u> positive effects on labor force outcomes for non-college men and women. However, in the <u>long run</u> being in traditionally female occupational programs, especially vocational programs such as homemaking, in high school is detrimental to the later well-being of non-college white women. Young women in such programs wind up in less traditional jobs without the benefit of higher wages. In contrast, black women in commer-

cial programs do earn more ten years later. However, for black women as well the positive effect of training for secretarial positions may be small relative to the long run substantial negative effect of segregating them in the relatively low-paid female wage sector. Unfortunately, at the time these data were collected, few women were in non-traditional vocational curricula in high school, so no test could be made as to the impact of participation in non-traditional occupational curricula on the later wages of young women.

By the tenth year after high school the same factors associated with the higher wages and earnings of college attenders (having been in a college preparatory curriculum) also predict the labor market success of those not attending college. Besides those who were in a college preparatory curriculum, those with higher abilities, those who spent time in homework, those with a positive attitude toward high school, and those who spent time in extra-curricular activities all had higher hourly wages than their peers ten years after.

As well as failing to confirm our original hypothesis of a difference between college- and non-college-bound high school students in the effects of high school experiences, these results suggest that youth who receive the basic schooling of those later going to college will be the most successful. There are a number of reasons why this would be the case. Rosenbaum (1976) suggested that the socialization of those in college preparatory versus other tracks is quite different. Students in college preparatory tracks receive the best teachers and teaching, have the highest prestige in the school, and, in general, have the most positive experience. General, vocational and commercial students have lower opinions of themselves as a result, and they are less likely to participate in extracurricular activities. In addition, Rosenbaum (1976) found that the variance in the abilities of college preparatory youth increased over the high school years, while that of non-college preparatory youth declined. The former became more differentiated, the latter more homogenous. Second, Bowles and Gintis (1976) suggested that the factors associated with the later labor market success of individuals are motivational and attitudinal, rather than either ability or skill-related. He cites evidence that the factors that employers view as most critical to the success of their employees and which they rate most highly are such things as dependability, internalization of the norms of the organization and rule-orientation. We have not explored differences in values between terminal high school graduates and college attenders; Bowles and Gintis (1976:135) suggest that rule-orientation is relatively more important at the lowest levels of the hierarchy of production, internalization of norms at the highest level, dependability in-between. More research is needed to sort out the different motivational factors and their origins prior to labor market entry.

Parents are the critical influences on the early ambitions, goals and course selection of their children. The sex-typing of the occupations of parent are strongly associated with those their children aspire to and eventually enter. Thus any program to broaden the choices of young men and women is doomed to failure if it does not take parents' preferences and prejudices into account. Special courses, including texts and counseling

for parents of adolescents or even young children would certainly be a requisite if school-initiated programs such as mandated under Title IX will succeed. At the same time, policy makers concerned with educational equity must emphasize affirmative action for adults both under Title IX and under the Title VII. The more adults in less traditional occupations, the more educational and occupational options their children will perceive and, perhaps, try.

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APPENDIX A:
Data from Other Surveys Comparable to the "Parnes"

## APPENDIX A
## DATA SETS COMPARABLE TO THE NLS (PARNES)

The data sets that are most similar to the "Parnes" data are described below. Basic characteristics of each sample are presented in Tables A1-4.

### Youth in Transition Panel

This sample is quite similar to the "Parnes," covering a birth cohort of approximately 1951. The Youth in Transition Study followed a sample of the class of 1969 from their sophomore year in high school (1966) to the spring of 1974, five years after high school graduation. Unfortunately, this study followed males, not females.

### The National Longitudinal Study of the High School Class of 1976 (The NLS of 1972)

Another study which is similar in timing to the "Parnes" is that of the high school class of 1972, carried out by the National Center for Educational Statistics. Young men and women who were interviewed in their senior year in the spring of 1972 were followed up in the fall of 1973, the fall of 1974, and the fall of 1976, about four and one half years after high school. They were reinterviewed in the fall of 1979. Unfortunately, since only seniors were interviewed, those who had dropped out before their senior year are not included in the panel. This cohort is slightly younger than the "Parnes" sample, with an approximate birth date of 1954.

### Project Talent

The third longitudinal data set comparable to the "Parnes" is that of Project Talent. Questionnaires were administered in 1960 to students in the high school classes of 1960 through 1963, when they were in grades 9 through 12. Their birth cohorts are approximately 1942 through 1945, thus this sample is comparable to the older respondents in the "Parnes" samples. Young men and women were (re)interviewed in grade 12, and at five and eleven years after high school.

### The Current Population Surveys (CPS)

This is not a longitudinal data set; different people are interviewed each year. However, by their ages in a recent year, e.g., 1976, birth cohorts can be identified that correspond to those of respondents in the "Parnes" samples, and which are one to five or five to ten years out of high school. Since these are not the same individuals we can't obtain a true longitudinal comparison. However, since they roughly approximate the cohorts in the Parnes, these data can be compared with the appropriate longitudinal data.

Table A-1: Selected Characteristics of Comparable Samples of Young White Women Five and Ten Years After High School, by Sample.

| Characteristics | | Five Years After High School | | Ten Years After High School | |
|---|---|---|---|---|---|
| | | CPS - 1970 Birth Cohort: 1946-50 | NLS - 1972 Birth Cohort: 1954-55 | CPS - 1975 Birth Cohort: 1946-50 | Project Talent[2] Birth Cohort: 1945-46 |
| Age | Years | 20-24 | 23 | 25-29 | 27 |
| Urban | % | 78 | 54 | | |
| South | % | | | | |
| Family Income | $ | | | | |
| Ever Married | % | 65 | 55 | 88 | 89 |
| Children | % | 42 | 25 | 78 | 82 |
| Armed Forces | % | | 2 | | 1 |
| **Employment** | | | | | |
| In Labor Force | % | 58 | 77 | 54[1] | |
| Employed | % | 53 | 69[3] | 50[1] | 51 |
| Not Employed & Enrolled in School | % | | 21[4] | | 4 |
| Keeping House | % | | 43 | 42[1] | 50 |
| Occupation | % | | | | |
| Job Satisfaction | % | | 28 | | 46 |
| **Schooling Completed** | | | | | |
| Less than High School | % | 19 | 0 | 17 | 12 |
| High School | % | 45 | 53 | 46 | 47 |
| More than High School | % | 36 | 47 | 37 | 41 |
| **Educational Plans** | | | | | |
| Plan to Continue Past High School | % | | | | |
| Plan to Work | % | | | | |
| Plan to Enter Armed Forces | % | | | | |
| Plan to be Homemaker | % | | | | |

[1] birth cohort 1941-1950 [2] white and black [3] includes military [4] may also be working

Table A-2: Selected Characteristics of Comparable Samples of Young Black Women Five and Ten Years After High School, by Samp

| Characteristics | | Five Years After High School | | Ten Years After High School | |
|---|---|---|---|---|---|
| | | CPS - 1970 Birth Cohort: 1946-50 | NLS - 1972 Birth Cohort: 1954-55 | CPS - 1975 Birth Cohort: 1946-50 | Project Talent[2] Birth Cohort: 1945-46 |
| Age | Years | 20-24 | 23 | 25-29 | 27 |
| Urban | % | 90 | 68 | | |
| South | % | | | | |
| Family Income | $ | | | | |
| Ever Married | % | 56 | 41 | 69 | 89 |
| Children | % | 62 | 48 | 84 | 82 |
| Armed Forces | % | | 3 | | 1 |
| Employment | | | | | |
| In Labor Force | % | 58 | 83 | 61[1] | |
| Employed | % | 49 | 67[3] | 53[1] | 31 |
| Not Employed & Enrolled in School | % | | 25[4] | | 4 |
| Keeping House | % | | 31 | 34[1] | 50 |
| Occupation | % | | | | |
| Job Satisfaction | % | | 16 | | 46 |
| Schooling Completed | | | | | |
| Less than High School | % | 36 | 0 | 30 | 12 |
| High School | % | 44 | 58 | 44 | 47 |
| More than High School | % | 20 | 42 | 26 | 41 |
| Educational Plans | | | | | |
| Plan to Continue Past High School | % | | | | |
| Plan to Work | % | | | | |
| Plan to Enter Armed Forces | % | | | | |
| Plan to be Homemaker | % | | | | |

[1] birth cohort 1941-1950 [2] white and black [3] includes military [4] may also be working

Table A-3: Selected Characteristics of Comparable Samples of Young White Men Five and Ten Years After High School, by Sample.

| Characteristics | | Five Years After High School | | | Ten Years After High School | |
|---|---|---|---|---|---|---|
| | | CPS - 1970 Birth Cohort: 1946-50 | NLS - 1972 Birth Cohort: 1954-5? | Youth in Transition, Birth Cohort 1951[2/] | CPS - 1975 Birth Cohort: 1946-50 | Project Talent Birth Cohort: 1945-46[2/] |
| Age | Years | 20-24 | 23 | 23 | 25-29 | 27 |
| Urban | % | | 53 | | | |
| South | % | 78 | | 30 | | |
| Family Income | $ | | | | | |
| Ever Married | % | 45 | 36 | 51 | 77 | 86 |
| Children | % | | 15 | 24 | | 75 |
| Armed Forces | % | | 22 | | | 59 |
| Employment | | | | | | |
| In Labor Force | % | 83 | 92 | 75 | 96[1/] | |
| Employed | % | 65 | 84[3/] | 70 | 90[1/] | 98 |
| Not Employed & Enrolled in School | % | | 30[4/] | 17 | | 4 |
| Keeping House | % | | 1 | | | 0.1 |
| Occupation | % | | | | | |
| Job Satisfaction | % | | 24 | | | 45 |
| Schooling Completed | | | | | | |
| Less than High School | % | 19 | | 7 | 14 | 9 |
| High School | % | 38 | 48 | 38 | 37 | 36 |
| More than High School | % | 43 | 52 | 55 | 49 | 55 |
| Educational Plans | | | | | | |
| Plan to Continue Past High School | % | | | | | |
| Plan to Work | % | | | | | |
| Plan to Enter Armed Forces | % | | | | | |
| Plan to be Homemaker | % | | | | | |

1/ birth cohort 1941-1950 2/ white and black 3/ includes military 4/ may also be working

Table A-4: Selected Characteristics of Comparable Samples of Young Black Men Five and Ten Years After High School, by Sample.

| Characteristics | | Five Years After High School | | | Ten Years After High School | |
|---|---|---|---|---|---|---|
| | | CPS - 1970 Birth Cohort: 1946-50 | NLS - 1972 Birth Cohort: 1954-55 | Youth in Transition Birth Cohort 1951[2/] | CPS - 1975 Birth Cohort: 1946-50 | Project Talent Birth Cohort: 1945-46[2/] |
| Age | Years | 20-24 | 23 | 23 | 25-29 | 27 |
| Urban | % | 82 | 61 | | | |
| South | % | | | 30 | | |
| Family Income | $ | | | | | |
| Ever Married | % | 42 | 33 | 51 | 64 | 86 |
| Children | % | | 37 | 24 | | 75 |
| Armed Forces | % | | 41 | | | 59 |
| Employment | | | | | | |
| In Labor Force | % | 84 | 98 | 75 | 92[1/] | |
| Employed | % | 59 | 85[3/] | 70 | 81[1/] | 98 |
| Not Employed & Enrolled in School | % | | 27[4/] | 17 | | 4 |
| Keeping House | % | | 2 | | | 0.1 |
| Occupation | % | | | | | |
| Job Satisfaction | % | | 16 | | | 45 |
| Schooling Completed | | | | | | |
| Less than High School | % | 41 | 0 | 7 | 28 | 9 |
| High School | % | 41 | 60 | 38 | 42 | 36 |
| More than High School | % | 18 | 40 | 55 | 30 | 55 |
| Educational Plans | | | | | | |
| Plan to Continue Past High School | % | | | | | |
| Plan to Work | % | | | | | |
| Plan to Enter Armed Forces | % | | | | | |
| Plan to be Homemaker | % | | | | | |

[1/] birth cohort 1941-1950 [2/] white and black [3/] includes military [4/] may also be working

APPENDIX B:
Detailed Descriptions of the Samples Used in the Study

Table B-1: Sample, Analyses Conducted, and Number of Cases (unweighted) for Results in this Report, by Race and Sex

| | Sample 1: Grade 7-9 in 1966/68 | | Sample 2: Grade 9-12 in 1966/68 | | Sample 3: Out of School in 1966/68 | |
|---|---|---|---|---|---|---|
| White Females | $t_9$[a] | 292 | $t_{12}$ | 804 | $t_{15}$ | 715 |
| | $t_{12}$ | 278 | $t_{15}$ | 696 | $t_{17}$ | 992 |
| | $t_{15}$ | 249 | $t_{17}$ | 341 | $t_{22}$ | 783 |
| | $\Delta_{9-12}$[b] | 278 | $\Delta_{12-15}$ | 483 | $\Delta_{15-17}$ | 681 |
| | $\Delta_{12-15}$ | 252 | $\Delta_{15-17}$ | 341 | $\Delta_{17-22}$ | 599 |
| Black Females | $t_9$ | 201 | $t_{12}$ | 417 | $t_{15}$ | 281 |
| | $t_{12}$ | 188 | $t_{15}$ | 377 | $t_{17}$ | 372 |
| | $t_{15}$ | 172 | $t_{17}$ | 218 | $t_{22}$ | 273 |
| | $\Delta_{9-12}$ | 188 | $\Delta_{12-15}$ | 263 | $\Delta_{15-17}$ | 266 |
| | $\Delta_{12-15}$ | 173 | $\Delta_{15-17}$ | 218 | $\Delta_{17-22}$ | 213 |
| White Males | $t_9$ | 231 | $t_{12}$ | 761 | $t_{15}$ | 394 |
| | $t_{12}$ | 192 | $t_{15}$ | 508 | $t_{17}$ | 677 |
| | $t_{15}$ | 149 | $t_{17}$ | 580 | $t_{22}$ | 667 |
| | $\Delta_{9-12}$ | 180 | $\Delta_{12-15}$ | 409 | $\Delta_{15-17}$ | 415 |
| | $\Delta_{12-15}$ | 142 | $\Delta_{15-17}$ | 580 | $\Delta_{17-22}$ | 534 |
| Black Males | $t_9$ | 205 | $t_{12}$ | 443 | $t_{15}$ | 214 |
| | $t_{12}$ | 177 | $t_{15}$ | 258 | $t_{17}$ | 290 |
| | $t_{15}$ | 129 | $t_{17}$ | 261 | $t_{22}$ | 245 |
| | $\Delta_{9-12}$ | 174 | $\Delta_{12-15}$ | 183 | $\Delta_{15-17}$ | 205 |
| | $\Delta_{12-15}$ | 126 | $\Delta_{15-17}$ | 263 | $\Delta_{17-22}$ | 209 |

[a] "t" refers to the time point at which data were collected for individuals, e.g., $t_9$" ninth grade, $t_{15}$ = 3 years after high school.

[b] "$\Delta$" refers to change between the two time points following it, e.g.,"$\Delta_{9-12}$" means change between grade 9 and grade 12.

## APPENDIX C:
## Means, Standard Deviations and Definitions Plus Complete Regressions of Variables on which Report is Based

Table C-1: Definitions, Means, and Standard Deviations of Variables Used In Analysis of Respondents Enrolled in the Seventh to Ninth Grade in 1966/68 by Race and Sex[a, b]

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Educational Goal $t_9$ | Respondent's educational goal at $t_1$ (in years of schooling). | 13.91 | 2.06 | 14.01 | 2.31 | 13.67 | 2.10 | 13.55 | 2.04 |
| $t_{12}$ | | 13.60 | 1.93 | 13.64 | 2.14 | 13.52 | 2.24 | 13.33 | 2.28 |
| $t_{15}$ | | 11.68 | 1.63 | 12.50 | 1.80 | 12.44 | 2.92 | 12.72 | 2.53 |
| Expected Occupation $t_9$ | Proportion female in the occupation | .70 | .32 | .78 | .28 | .11 | .18 | .17 | .26 |
| $t_{12}$ | in which the respondent expects at | .69 | .29 | .77 | .24 | .13 | .20 | .16 | .23 |
| $t_{15}$ | $t_1$ to be employed at age 30/35. | .66 | .28 | .73 | .30 | .12 | .18 | .13 | .18 |
| Vocational $t_9$ | Respondent's high school curriculum | .01 | .09 | .02 | .13 | .08 | .28 | .07 | .26 |
| $t_{12}$ | (dummy variable coded 1=yes, 0=no) | .05 | .21 | .03 | .16 | .17 | .38 | .13 | .34 |
| Commercial $t_9$ | at $t_1$. | .08 | .27 | .05 | .22 | .03 | .18 | .03 | .18 |
| $t_{12}$ | | .16 | .37 | .05 | .23 | .03 | .16 | .03 | .18 |
| College $t_9$ | | .24 | .43 | .10 | .31 | .22 | .41 | .06 | .24 |
| $t_{12}$ | | .26 | .44 | .12 | .33 | .25 | .43 | .20 | .40 |
| General $t_9$ | | .67 | .47 | .83 | .38 | .67 | .47 | .83 | .37 |
| $t_{12}$ | | .53 | .50 | .80 | .40 | .55 | .50 | .64 | .48 |
| Household Income $t_9$ | Respondent's household | 14,048 | 8,361 | 5,564 | 3,907 | 11,303 | 6,823 | 6,286 | 4,989 |
| $t_{12}$ | income at $t_1$.[c] | 13,771 | 7,739 | 6,448 | 4,726 | 13,053 | 8,120 | 8,684 | 6,315 |
| $t_{15}$ | | 10,459 | 7,662 | 6,090 | 4,753 | 11,560 | 6,762 | 8,600 | 6,183 |
| Southern Residence $t_9$ | Respondent lives in the South | .32 | .47 | .75 | .43 | .41 | .49 | .75 | .43 |
| $t_{12}$ | at $t_1$ (1=yes). | .33 | .47 | .72 | .45 | .40 | .49 | .69 | .46 |
| Metropolitan Residence $t_9$ | Respondent lives in an SMSA | .58 | .48 | .55 | .50 | .57 | .50 | .55 | .50 |
| $t_{12}$ | at $t_1$ (1=yes). | .56 | .50 | .58 | .49 | .56 | .50 | .62 | .49 |
| Unemployment Rate $t_9$ | Unemployment rate in labor | 3.99 | 1.71 | 4.64 | 2.11 | 5.16 | 1.91 | 5.19 | 1.63 |
| $t_{12}$ | market of resident at $t_1$ | 6.27 | 2.00 | 6.11 | 1.85 | 4.17 | 1.82 | 4.57 | 2.05 |
| $t_{15}$ | in percentage points. | 8.26 | 2.71 | 7.61 | 2.67 | 5.48 | 2.10 | 5.27 | 1.74 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Occupation $t_{12}$ | Proportion female in | .74 | .27 | .70 | .28 | .22 | .25 | .25 | .26 |
| $t_{15}$ | respondent's occupation at $t_i$. | .73 | .27 | .65 | .28 | .18 | .23 | .19 | .22 |
| Job Satisfaction $t_{12}$ | Respondent's job satisfaction at $t_i$ (1=very satisfied). | .43 | .50 | .41 | .50 | .36 | .48 | .31 | .46 |
| Wage $t_{12}$ | Respondent's hourly wage at | 1.67 | 2.06 | 1.20 | 1.28 | 2.66 | 1.04 | 2.75 | 1.08 |
| $t_{15}$ | current or last job at $t_i$. | 2.46 | .93 | 2.23 | .95 | 4.33 | 1.64 | 3.55 | 1.31 |
| Employed $t_{12}$ | Respondent's employment status | .39 | .49 | .20 | .40 | .64 | .48 | .54 | .50 |
| $t_{15}$ | at $t_i$ (1=employed). | .52 | .50 | .35 | .48 | .89 | .33 | .80 | .41 |
| Marital Status $t_{12}$ | Respondent's marital status at $t_i$ (1=married, living with husband). | .14 | .34 | .12 | .33 | .07 | .25 | .06 | .24 |
| Work Experience $t_{12}$ | Number of years respondent has | .62 | .81 | .73 | 1.10 | .61 | .49 | .51 | .50 |
| $t_{15}$ | worked since age 18 at $t_i$. | 1.74 | 1.19 | 1.26 | 1.35 | 2.19 | .85 | 1.75 | .89 |
| Unemployment $t_{12}$ | Number of weeks respondent was | 3.16 | 7.83 | 3.09 | 6.43 | 3.92 | 8.74 | 5.14 | 9.56 |
| Experience $t_{15}$ | Unemployed last year at $t_i$. | 1.92 | 6.42 | 6.40 | 12.07 | 3.14 | 7.57 | 5.79 | 11.10 |
| Health Problem $t_{12}$ | Respondent has a health problem at | .02 | .14 | .04 | .19 | .07 | .25 | .02 | .15 |
| $t_{15}$ | $t_i$ that limits work (1=yes). | .03 | .18 | .03 | .18 | .07 | .25 | .09 | .28 |
| Parental Status $t_{12}$ | Respondent has a child under age six at $t_i$ (1=yes). | .08 | .30 | .27 | .44 | .02 | .14 | .04 | .20 |
| Annual Hours $t_{12}$ | Number of hours respondent | 242 | 455 | 142 | 358 | 920 | 742 | 899 | 836 |
| $t_{15}$ | worked last year at $t_i$. | 1005 | 834 | 671 | 764 | 1843 | 750 | 1614 | 808 |
| High School Grad $t_{15}$ | Respondent graduated from high school or received GED at $t_i$ (1=yes). | .73 | .44 | .51 | .50 | .66 | .48 | .47 | .50 |
| Change in High School Curriculum | Change in high school curriculum. | .14 | .35 | .12 | .32 | .09 | .28 | .19 | .39 |
| Change in Educational Goal $t_{12}$ | Change in educational goal $t_i$ to $t_j$ (in years). | -.44 | 1.94 | -.49 | 2.32 | -.33 | 2.03 | -.15 | 2.33 |
| Change in Expected Occupation $t_{912}$ | Differences between the proportion female in the occupation respondent | -.03 | .32 | .01 | .31 | .01 | .25 | -.01 | .33 |
| $t_{1215}$ | expected at $t_i$ to have at 30/35 & that expected at $t_j$ to have at 30/35. | 0 | .35 | -.05 | .27 | -.02 | .18 | -.03 | .28 |

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| Variable | Definition | White Women Mean | White Women Standard Deviation | Black Women Mean | Black Women Standard Deviation | White Men Mean | White Men Standard Deviation | Black Men Mean | Black Men Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|
| Birth $t_{912}$ | Respondent bore a child between $t_i$ and $t_j$ (1=yes). | .11 | .32 | .29 | .45 | .04 | .20 | .10 | .30 |
| $t_{1215}$ | | .20 | .40 | .18 | .38 | .20 | .40 | .18 | .39 |
| Change in Household Income $t_{912}$ | Change in Respondent's household income $t_i$ to $t_j$ (in dollars). | -394 | 7819 | 922 | 4672 | 1746 | 7120 | 2349 | 6158 |
| $t_{1215}$ | | -3447 | 9096 | -433 | 5349 | -368 | 8013 | -437 | 7014 |
| Married $t_{912}$ | Respondent married between $t_i$ and $t_j$ (1=yes). | .27 | .45 | .23 | .42 | .12 | .33 | .12 | .32 |
| $t_{1215}$ | | .27 | .44 | .14 | .35 | .22 | .42 | .17 | .38 |
| Training $t_{12}$ | Respondent received occupational training after high school, including military training (1=yes). | .04 | .19 | .07 | .26 | .01 | .12 | .06 | .25 |
| $t_{15}$ | | .16 | .37 | .20 | .40 | .26 | .44 | .23 | .42 |
| $t_{17}$ | | .18 | .39 | .27 | .45 | .27 | .44 | .26 | .44 |
| Change in Occupation $t_{1215}$ | Difference between proportion female in respondent's occupations at $t_i$ and at $t_j$. | -.02 | .35 | -.04 | .33 | -.04 | .29 | -.06 | .29 |
| Change in Wage $t_{1215}$ | Change in hourly wage $t_i$ to $t_j$. | .84 | 2.12 | .84 | 1.55 | 1.47 | 1.78 | .73 | 1.07 |
| Change in Annual Hours $t_{1215}$ | Change in annual hours worked $t_i$ to $t_j$ (in hours). | 774 | 904 | 529 | 840 | 898 | 994 | 742 | 1080 |
| Change in Years Worked $t_{1215}$ | Change in years worked $t_i$ to $t_j$ (in years). | 1.12 | .93 | .56 | .71 | 1.51 | .88 | 1.24 | .98 |
| Change in Weeks Un-Employed $t_{1215}$ | Change in weeks unemployed $t_i$ to $t_j$ (in weeks). | -1.2 | 9.00 | 2.54 | 12.74 | -1.12 | 10.87 | .38 | 12.59 |
| Change in Health $t_{1215}$ | Change in health $t_i$ - $t_j$. (+1=worse, 0=no change, -1=better) | .02 | .14 | .01 | .11 | .04 | .20 | .08 | .28 |
| School Enrollment $t_9$ | Not enrolled in school | .02 | .14 | .06 | .24 | .04 | .20 | .09 | .28 |
| $t_{12}$ | at $t_i$ (1=yes). | .22 | .41 | .39 | .49 | .32 | .47 | .51 | .50 |
| Behind a Grade | Behind a grade (1=yes). | .14 | .35 | .38 | .49 | .17 | .38 | .37 | .48 |
| Birth Cohort | Respondent's birth cohort (1=1940-44, 2=1945-49, 3=1950-54, 4=1955-59) | 3.00 | .06 | 3.00 | .07 | 3.00 | 0 | 3.00 | .07 |
| Knowledge of the World of Work | Percentage of occupations respondent was able to correctly identify by the tasks associated with them (four items). | .63 | .25 | .49 | .26 | .56 | .30 | .48 | .27 |

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| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Post Plans | Plans to work immediately after leaving school (1=yes). | .77 | .42 | .86 | .34 | .58 | .49 | .65 | .48 |
| No Kids $t_{12}$ | Respondent has no children at $t_1$ (1=yes). | .90 | .30 | .73 | .44 | .98 | .14 | .95 | .21 |
| Mother Worked | Mother worked for pay when respondent was growing up (1=yes). | .43 | .50 | .52 | .50 | NA | NA | NA | NA |
| Parents Alive | Both parents alive (1=yes). | .95 | .22 | .86 | .35 | .88 | .32 | .89 | .47 |
| Intact Family | Respondent lived with both parents at age 16 (1=yes). | .81 | .39 | .52 | .50 | .70 | .46 | .51 | .50 |
| Father's Education | Father's education. | 10.83 | 3.80 | 7.14 | 3.68 | 9.36 | 3.42 | 6.82 | 3.71 |
| Mother's Education | Mother's education. | 10.53 | 3.09 | 8.32 | 3.11 | 9.72 | 3.04 | 7.98 | 2.97 |
| Household Head's Occupation | Occupation of head of household when respondent was 14 (Duncan scale). | 36.20 | 23.59 | 16.88 | 3.16 | 30.09 | 21.14 | 15.38 | 11.25 |
| Parental Socioeconomic Status | An index composed of three variables - occupation of head of household when respondent was 14, mother's education and father's education standardized to have a mean of 10 and a standard deviation of 3. | 10.76 | 2.67 | 8.13 | 1.98 | 9.86 | 2.33 | 7.96 | 1.88 |
| Mother's Occupation | Proportion female in the occupation held by respondent's mother when the former was growing up. | .66 | .30 | .73 | .32 | .63 | .30 | .61 | .36 |
| Father's Occupation | Proportion of females in the occupation held by respondent's father when the former was growing up. | .18 | .24 | .27 | .34 | .14 | .19 | .09 | .13 |
| Number of Siblings | The number of respondent's siblings. | 3.34 | 2.29 | 6.15 | 2.94 | 3.65 | 2.38 | 5.12 | 2.93 |
| Farm Background | Respondent lived on a farm at age 14. | .11 | .31 | .18 | .39 | .14 | .35 | .20 | .40 |
| Foreign-born | Respondent's parents or grandparents were born outside the U.S. and Canada. | .27 | .44 | 0 | .39 | .18 | .39 | .00 | .07 |
| Parent Help | Proportion of respondents receiving much help and encouragement from parents to continue past high school (three items). | 5.82 | 2.49 | 5.29 | 2.43 | 5.32 | 2.35 | 5.31 | 2.44 |
| Parents' Educational Goal | Respondent's parents wanted her/him to continue past high school (1=yes). | .47 | .50 | .42 | .50 | .34 | .48 | .29 | .46 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Foreign Language | Respondent spoke a language other than English in the home while growing up (1=yes). | .17 | .37 | 0 | .07 | .07 | .26 | 0 | 0 |
| Friends in College | Number of respondent's friends attending or planning to go to college. | 2.08 | .85 | 1.79 | .81 | 1.94 | .83 | 1.76 | .81 |
| Mother's Encouragement | Respondent received encouragement from mother to go to college (3=much, 2=some, 1=none). | 2.32 | .80 | 2.38 | .74 | 2.28 | .83 | 2.40 | .79 |
| Father's Encouragement | (same as above, but 'father') | 2.16 | .85 | 1.78 | .83 | 2.06 | .83 | 2.09 | .86 |
| Teacher's Encouragement | (same as above, but 'teacher') | 2.20 | .81 | 2.20 | .80 | 2.07 | .83 | 2.11 | .81 |
| Expected Parental Help | Respondent expected help from parents to go to college (3=much, 2=some, 1=none). | 2.11 | .83 | 1.93 | .82 | 1.75 | .84 | 1.62 | .72 |

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[a] This table is based on unweighted data, as blacks and whites are analyzed separately.

[b] $t_9$ refers to ninth grade, $t_{12}$ to 12th grade, $t_{15}$ to three years after high school.

[c] Business, interest, dividends, unemployment, wages and other.

Table C-2: Definitions, Means, and Standard Deviations of Variables Used in Analysis of Respondents Enrolled in the Ninth to Twelfth Grade in 1966/68 by Race and Sex[a, b]

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Educational Goal $t_{12}$ | Respondent's educational goal at $t_1$ | 13.54 | 1.83 | 13.95 | 1.92 | 13.84 | 1.96 | 13.99 | 1.98 |
| $t_{15}$ | (years of schooling). | 12.68 | 1.46 | 13.17 | 1.76 | 12.97 | 1.66 | 13.70 | 1.95 |
| Expected Occupation $t_{12}$ | Proportion female in the occupa- | .71 | .28 | .78 | .25 | .13 | .20 | .18 | .24 |
| $t_{15}$ | tion in which the respondent expected at $t_1$ to be employed at age 30/35. | .70 | .29 | .74 | .27 | .13 | .18 | .21 | .25 |
| Vocational | Respondent's high school cur- | .05 | .22 | .05 | .22 | .18 | .38 | .18 | .39 |
| Commercial | riculum (dummy variables each | .26 | .44 | .17 | .38 | .05 | .22 | .06 | .24 |
| College Prep. | coded: 1=yes, 0=no). | .26 | .44 | .17 | .38 | .24 | .43 | .16 | .37 |
| General | | .43 | .50 | .61 | .49 | .52 | .50 | .59 | .49 |
| Household Income $t_{12}$ | Household income[c] | 14009 | 7818 | 7045 | 5137 | 14307 | 7834 | 7726 | 6080 |
| $t_{15}$ | at $t_1$. | 11133 | 6903 | 7200 | 5667 | 13530 | 8919 | 9360 | 6269 |
| $t_{17}$ | | 11186 | 6673 | 7524 | 5838 | 12724 | 7216 | 9908 | 6531 |
| Southern Residence $t_{12}$ | Respondent lives in the South | .30 | .46 | .68 | .47 | .31 | .46 | .65 | .48 |
| $t_{15}$ | at $t_1$ (1=yes). | .32 | .47 | .56 | .50 | .33 | .47 | .58 | .49 |
| Metropolitan Residence $t_{12}$ | Respondent lives in an SMSA | .55 | .50 | .62 | .49 | .56 | .50 | .63 | .48 |
| $t_{15}$ | at $t_1$ (1=yes). | .59 | .49 | .78 | .42 | .61 | .49 | .72 | .45 |
| Unemployment Rate $t_{12}$ | Unemployment rate in labor market | 5.10 | 2.19 | 5.43 | 2.10 | 4.41 | 1.78 | 4.69 | 1.72 |
| $t_{15}$ | of residence at $t_1$ in percentage points. | 7.22 | 2.80 | 6.72 | 2.71 | 5.27 | 2.01 | 5.23 | 2.10 |
| Occupation $t_{12}$ | Proportion female in respondent's | .73 | .26 | .71 | .27 | .24 | .26 | .22 | .24 |
| $t_{15}$ | occupation at $t_1$ | .75 | .26 | .69 | .27 | .17 | .22 | .22 | .25 |
| $t_{17}$ | (1970 Census data) | .73 | .28 | .68 | .27 | .16 | .21 | .21 | .23 |
| Job Satisfaction $t_{12}$ | Respondent's job satisfaction | .49 | .50 | | | .36 | .48 | .30 | .46 |
| $t_{15}$ | at $t_1$ (1=very satisfied). | .52 | .50 | .40 | .49 | .43 | .50 | .28 | .45 |
| Employed $t_{12}$ | Respondent's employment | .40 | .49 | .24 | .43 | .60 | .49 | .49 | .50 |
| $t_{15}$ | status at $t_1$ (1=employed). | .57 | .50 | .46 | .50 | .89 | .31 | .72 | .45 |
| $t_{17}$ | | .53 | .50 | .52 | .50 | .95 | .22 | .85 | .37 |
| Wage $t_{12}$ | Respondent's hourly wage | 1.43 | 1.34 | 1.16 | 1.08 | 2.43 | .94 | 2.45 | .94 |
| $t_{15}$ | at current or last | 2.68 | 1.58 | 2.46 | .95 | 4.56 | 1.86 | 3.61 | 1.20 |
| $t_{22}$ | job at $t_1$. | 2.80 | 1.13 | 2.69 | .92 | 5.03 | 2.43 | 4.24 | 2.29 |
| Marital Status $t_{12}$ | Respondent is married, living | .12 | .33 | .09 | .28 | .03 | .16 | .03 | .17 |
| $t_{15}$ | with spouse at $t_1$. | .61 | .49 | .40 | .49 | .51 | .50 | .35 | .48 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Work Experience $t_{12}$ | Number of years respondent has | .54 | .79 | .64 | .91 | .55 | .50 | .42 | .49 |
| $t_{15}$ | worked since age 18 at $t_i$. | 2.02 | 1.32 | 1.46 | 1.37 | 3.26 | 1.05 | 2.51 | 1.11 |
| Unemployment Experience $t_{12}$ | Number of weeks respondent | 1.93 | 6.09 | 2.96 | 6.79 | 3.31 | 8.11 | 3.91 | 8.61 |
| $t_{15}$ | was unemployed last year at $t_i$. | 2.12 | 6.14 | 4.72 | 10.03 | 2.53 | 6.94 | 4.97 | 10.51 |
| Health Problem $t_{12}$ | Respondent has a health problem | .03 | .18 | .04 | .19 | .06 | .25 | .03 | .17 |
| $t_{15}$ | at $t_i$ that limits work (1=yes). | .05 | .22 | .07 | .25 | .08 | .27 | .09 | .28 |
| Parental Status $t_{12}$ | Respondent has a child under | .06 | .24 | .19 | .39 | .01 | .08 | .02 | .14 |
| $t_{15}$ | age six at $t_i$ (1=yes). | .37 | .48 | .53 | .50 | .19 | .39 | .18 | .38 |
| High School Graduate $t_{15}$ | Respondent graduated from high | .83 | .38 | .69 | .46 | .81 | .39 | .69 | .46 |
| $t_{17}$ | school or received GED at $t_i$ (1=yes). | .88 | .33 | .79 | .41 | .85 | .35 | .71 | .46 |
| Training $t_{12}$ | Respondent received occupational | .02 | .15 | .03 | .17 | .02 | .13 | .03 | .16 |
| $t_{15}$ | training after high school in- | .14 | .35 | .19 | .40 | .32 | .47 | .26 | .44 |
| $t_{17}$ | cluding military training (1=yes). | .16 | .36 | .19 | .39 | .32 | .47 | .21 | .41 |
| Annual Hours $t_{12}$ | Number of hours respondent worked | 308 | 445 | 234 | 406 | 826 | 675 | 730 | 665 |
| $t_{15}$ | last year at $t_i$. | 1005 | 879 | 796 | 844 | 1792 | 820 | 1470 | 880 |
| $t_{17}$ | | 980 | 928 | 1083 | 906 | 1852 | 804 | 1504 | 851 |
| No Kids $t_{12}$ | Respondent has no children | .94 | .24 | .81 | .39 | .99 | .09 | .98 | .15 |
| $t_{15}$ | at $t_i$ (1=yes). | .63 | .48 | .45 | .50 | .82 | .39 | .82 | .39 |
| Change in Educational Goal $t_{1215}$ | Change in educational goal $t_i$ to $t_j$ (in years). | -.40 | 1.63 | -.67 | 1.97 | -.49 | 1.91 | .11 | 2.18 |
| Change in Expected Occupation $t_{1215}$ | Difference between the proportion female in the occupation respondent expected at $t_i$ to have at 30/35 and that expected at $t_j$ to have at 30/35. | 0 | .33 | -.03 | .28 | .01 | .20 | .04 | .30 |
| Change in Occupation $t_{1215}$ | Difference between proportion female | 0 | .33 | -.03 | .34 | -.07 | .32 | .02 | .31 |
| $t_{1517}$ | in respondent's occupation at $t_i$ and $t_j$. | -.03 | .30 | -.02 | .27 | -.01 | .21 | -.01 | .24 |
| Change in Hourly Wage $t_{1215}$ | Change in hourly wage, $t_i$ to $t_j$. | 1.34 | 1.90 | 1.26 | 1.39 | 2.22 | 1.95 | 1.16 | 1.46 |
| $t_{1517}$ | | .17 | .95 | .37 | .88 | .64 | 2.40 | .45 | 1.89 |
| Change in Years Worked $t_{1215}$ | Change in years worked $t_i$ to $t_j$. | 1.52 | 1.20 | .79 | .99 | 2.67 | 1.08 | 2.08 | 1.11 |
| Change in Weeks Unemployed $t_{1215}$ | Change in weeks unemployed $t_i$ to $t_j$. | .19 | 8.54 | 1.50 | 11.62 | -1.11 | 10.89 | 1.52 | 10.88 |
| Birth Cohort | Respondent's birth cohort (1=1940-1944, 2=1945-49, 3=1950-54, 4=1955-59). | 2.98 | .18 | 2.94 | .26 | 2.98 | .13 | 2.98 | .17 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Knowledge of the World of Work | Percentage of occupations respondent was able to correctly identify by the tasks associated with them (four items). | .70 | .22 | .57 | .26 | .68 | .26 | .56 | .27 |
| Behind a Grade | Behind a grade (1=yes). | .07 | .26 | .17 | .38 | .05 | .23 | .10 | .31 |
| Mother Worked | Respondent's mother worked for pay while respondent was growing up (1=yes). | .40 | .49 | .49 | .50 | NA | NA | NA | NA |
| Intact Family | Respondent lived with both natural parents at age 14 (1=yes). | .84 | .37 | .59 | .49 | .84 | .47 | .52 | .50 |
| Father's Education | Father's education. | 10.76 | 3.34 | 7.46 | 3.71 | 9.97 | 3.25 | 7.55 | 3.51 |
| Mother's Education | Mother's education.. | 10.82 | 2.58 | 8.98 | 2.95 | 10.36 | 2.62 | 8.87 | 2.74 |
| Household Head's Occupation | Occupation of head of household when respondent was 14 (Duncan Scale). | 35.44 | 23.34 | 17.06 | 13.02 | 32.73 | 22.43 | 16.17 | 12.16 |
| Parental Socioeconomic Status | An index composed of three variables: occupation of head of household when respondent was 14, mother's education, and father's education - standardized to have a mean of 10 and a standard deviation of 3. | 10.83 | 2.33 | 8.48 | 2.00 | 10.31 | 2.25 | 8.44 | 1.88 |
| Mother's Occupation | Proportion female in the occupation held by respondent's mother when the former was growing up. | .68 | .28 | .77 | .30 | .62 | .31 | .72 | .31 |
| Father's Occupation | Proportion of females in the occupation held by respondent's father when the former was growing up. | .17 | .23 | .24 | .32 | .13 | .17 | .11 | .17 |
| Number of Siblings | The number of respondent's siblings. | 3.15 | 2.13 | 5.35 | 2.83 | 3.23 | 2.21 | 4.93 | 2.94 |
| Farm Background | Respondent lived on a farm at age 14. | .12 | .32 | .16 | .37 | .16 | .37 | .17 | .38 |
| Foreign-born | Respondent's parents or grandparents were born outside the U.S. and Canada. | .29 | .45 | .01 | .09 | .28 | .45 | .01 | .11 |
| Parent-Teacher Help | Parent-teacher help and encouragement to go on past high school (score 1 (none) to 9 (a great deal)). | 5.28 | 2.50 | 5.33 | 2.32 | 4.96 | 2.47 | 5.12 | 2.27 |
| Parent's Educational Goal | Respondent's parents wanted her/him to continue past high school (1=yes). | .45 | .50 | .48 | .50 | .41 | .49 | .36 | .48 |
| Foreign Language | Respondent spoke a language other than English in the home while growing up (1=yes). | .14 | .35 | .01 | .12 | .05 | .21 | 0 | .06 |

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| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Friends in College | Number of respondent's friends attending or planning to go to college. | 2.05 | .83 | 1.83 | .82 | 1.90 | .82 | 1.88 | .84 |
| Public School | Respondent attended a public high school (1=yes). | .94 | .23 | .97 | .17 | .96 | .20 | .99 | .11 |
| Students Per Teacher | Student/faculty ratio in respondent's high school. | 20.32 | 5.59 | 21.72 | 3.85 | 20.43 | 4.95 | 21.83 | 3.91 |
| Per Pupil Expenditure | Dollar expenditure per pupil in school district, adjusted for regional cost-of-living differences. | 865 | 243 | 802 | 222 | 966 | 286 | 937 | 251 |
| IQ | Respondent's score on standard IQ test. | 102 | 13 | 86 | 14 | 100 | 13 | 85 | 14 |
| Hours in Homework | Hours respondent spent per week on homework while in high school.[d] | 2.46 | 1.06 | 2.42 | 1.07 | 2.06 | .97 | 2.28 | 1.00 |
| Hours in Extra-Curricular Activities | Hours respondent spent per week in extracurricular activities while in high school.[d] | 1.53 | .85 | 1.51 | .72 | 2.33 | 1.14 | 2.38 | 1.20 |
| Sports | Respondent's favorite extracurricular activity in high school was sports (1=yes). | .32 | .47 | .33 | .47 | .68 | .47 | .68 | .47 |
| Work | The main non-school related activity at which respondent spent the last year in high school was working for pay (1=yes). | .11 | .31 | .05 | .21 | .18 | .39 | .15 | .36 |
| Math Favorite | Respondent's favorite high school subject was math (1=yes). | .09 | .29 | .09 | .29 | .19 | .39 | .19 | .39 |
| Math Least Liked | Respondent's least liked high school subject was math (1=yes). | .25 | .43 | .32 | .47 | .20 | .40 | .25 | .43 |
| Attitude Toward High School | Respondent's attitude toward the high school experience (1=liked it a lot). | .47 | .50 | .60 | .49 | .33 | .47 | .56 | .50 |

[a] This table is based on unweighted data, as blacks and whites are analyzed separately.

[b] $t_{12}$ refers to twelfth grade, $t_{15}$ to three years after high school, $t_{17}$ to five years after high school.

[c] Business, interest, dividends, unemployment, wages and other.

[d] 0 = none, 1 = 1 to 4, 2 = 5 to 9, 3 = 10 to 14, 4 = 15 to 19, 5 = 20+

Table C-3: Educational Goal in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | | | | |
| Expected Occupation | | | | |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | -.328 | .187 | .518 | -.199 |
| Metropolitan Residence | -.060 | -.414 | -.080 | .222 |
| Unemployment Rate | .049 | -.018 | -.201* | -.012 |
| Health Problem | | | | |
| Grade Below | -.527 | -1.41* | .086 | -.358 |
| Knowledge of World of Work | .564 | .799 | .280 | -.226 |
| Mother Worked for Pay | .200 | -.076 | | |
| Intact Family | .199 | -.191 | -.489 | -.702* |
| Father's Education | .094* | .085 | .177* | -.070 |
| Mother's Education | -.068 | -.019 | .021 | .090 |
| Number of Siblings | .045 | -.063 | .015 | .030 |
| Farm Background | .273 | .054 | -.345 | -.457 |
| Foreign Born | -.174 | 1.56 | .748* | 2.89 |
| Parent-Teacher Help and Encouragement | .265* | .064 | .056 | .171* |
| Parents' Educational Goal | .894* | 1.51* | 1.21* | .929* |
| Foreign Language | -.307 | 4.24* | -.138 | |
| Family Income (000's) | .008 | -.098* | .03 | .06 |
| IQ | | | | |
| Friends in College | .069 | .099 | .362* | .153 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | .390 | -.829 | -1.63* | -1.32* |
| Father's Occupation | .325 | .020 | .887 | 3.24* |
| Constant | 10.28 | 14.35 | 11.91 | 12.69 |
| Adjusted R Square | .351 | .257 | .326 | .182 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-4: Proportion Female in Expected Occupation in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | | | | |
| Expected Occupation | | | | |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | .038 | -.094* | .002 | -.121* |
| Metropolitan Residence | -.032 | .007 | -.021 | -.075 |
| Unemployment Rate | .004 | .048* | .015* | .008 |
| Health Problem | | | | |
| Grade Below | .128* | .105* | -.022 | -.027 |
| Knowledge of World of Work | .241* | -.136* | .051 | .017 |
| Mother Worked for Pay | .134* | .056 | | |
| Intact Family | -.108* | -.024 | .001 | .110* |
| Father's Education | -.005 | -.055* | .004 | .028* |
| Mother's Education | .003 | .024* | .004 | -.009 |
| Number of Siblings | -.004 | -.00005 | .013* | -.004 |
| Farm Background | .043 | -.044 | -.048 | .061 |
| Foreign Born | .053 | .234 | .039 | -.206 |
| Parent-Teacher Help and Encouragement | -.008 | .032* | .011 | -.028* |
| Parents' Educational Goal | -.001 | -.160* | -.033 | -.012 |
| Foreign Language | .155* | -.653* | -.035 | |
| Family Income (000's) | -.002 | .03* | -.003 | -.01* |
| IQ | | | | |
| Friends in College | -.001 | .064* | -.001 | .025 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | -.109 | .456* | -.013 | .135* |
| Father's Occupation | -.092 | .260* | .055 | -.309* |
| Constant | .700 | .024 | -.114 | .234 |
| Adjusted R Square | .145 | .513 | .038 | .076 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-5: Whether Enrolled in a Vocational Curriculum in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | .005 | .001 | -.014 | -.002 |
| Expected Occupation | .009 | -.110* | -.143 | -.242* |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | .016 | -.040 | -.036 | -.091 |
| Metropolitan Residence | -.009 | .004 | -.004 | -.017 |
| Unemployment Rate | .001 | .009 | -.008 | .005 |
| Health Problem | | | | |
| Grade Below | -.020 | .034 | .036 | .090* |
| Knowledge of World of Work | .002 | .061 | .016 | -.072 |
| Mother Worked for Pay | .003 | .006 | | |
| Intact Family | .019 | .011 | .008 | .130* |
| Father's Education | -.002 | -.003 | .001 | .008 |
| Mother's Education | -.0004 | .003 | .012 | .015* |
| Number of Siblings | -.004 | .003 | .010 | -.003 |
| Farm Background | -.014 | -.015 | .114 | .058 |
| Foreign Born | .003 | .080 | .058 | -.121 |
| Parent-Teacher Help and Encouragement | -.003 | .010* | .006 | -.024* |
| Parents' Educational Goal | -.022 | -.009 | -.071 | .121* |
| Foreign Language | -.023 | -.090 | -.070 | |
| Family Income (000's) | .0005 | .010* | -.003 | -.010* |
| IQ | | | | |
| Friends in College | -.004 | -.006 | .004 | .027 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | -.058* | -.029 | .019 | -.004 |
| Father's Occupation | .015 | .003 | -.090 | -.078 |
| Constant | .219 | -.077 | .154 | .081 |
| Adjusted R Square | -.002 | .140 | .001 | .151 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-6: Whether Enrolled in a Commercial Curriculum in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | -.032* | -.008 | .004 | .002 |
| Expected Occupation | -.167* | -.389* | -.109 | .267* |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | -.045 | -.109* | -.032 | -.088* |
| Metropolitan Residence | -.042 | .067 | .014 | .059 |
| Unemployment Rate | .004 | .023* | .006 | -.002 |
| Health Problem | | | | |
| Grade Below | .009 | .131* | -.066 | -.012 |
| Knowledge of World of Work | .120 | .006 | .019 | -.046 |
| Mother Worked for Pay | .0004 | -.019 | | |
| Intact Family | .015 | -.028 | .004 | -.025 |
| Father's Education | .006 | -.018* | .013* | -.011* |
| Mother's Education | -.003 | .001 | -.028* | .006 |
| Number of Siblings | -.005 | -.004 | .0009 | .006 |
| Farm Background | .012 | -.087* | -.025 | -.022 |
| Foreign Born | .058 | .091 | -.021 | -.109 |
| Parent-Teacher Help and Encouragement | -.014 | .017* | -.002 | .003 |
| Parents' Educational Goal | -.054 | .034 | -.049 | -.070* |
| Foreign Language | .037 | -.234 | -.016 | |
| Family Income (000's) | -.0006 | .006 | -.002 | -.002 |
| IQ | | | | |
| Friends in College | .018 | -.056* | .006 | .0009 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | .002 | .228* | .115* | -.004 |
| Father's Occupation | .038 | -.033 | .284* | -.130 |
| Constant | .607 | .345 | .051 | .071 |
| Adjusted R Square | .062 | .246 | .205 | .232 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-7: Whether Enrolled in a General Curriculum in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | -.016 | -.011 | -.066* | -.031* |
| Expected Occupation | .195* | .723* | .219 | -.038 |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | .009 | .188* | .094 | .223* |
| Metropolitan Residence | -.002 | .045 | -.112 | -.141* |
| Unemployment Rate | -.023 | -.031* | -.002 | .008 |
| Health Problem | | | | |
| Grade Below | -.129 | -.219* | .015 | -.045 |
| Knowledge of World of Work | -.312* | -.323* | -.243* | .006 |
| Mother Worked for Pay | .022 | -.056 | | |
| Intact Family | .058 | -.122* | -.022 | -.092 |
| Father's Education | -.004 | -.013 | -.001 | .001 |
| Mother's Education | -.005 | .017 | -.027 | -.011 |
| Number of Siblings | .0003 | -.008 | -.0002 | .006 |
| Farm Background | .020 | .112 | -.034 | -.041 |
| Foreign Born | -.223* | .352 | -.060 | .426 |
| Parent-Teacher Help and Encouragement | .001 | -.019 | .022 | .002 |
| Parents' Educational Goal | -.052 | -.058 | .291* | -.042 |
| Foreign Language | .035 | .387 | .110 | |
| Family Income (000's) | -.005 | -.01 | .005 | .02* |
| IQ | | | | |
| Friends in College | -.096* | .043 | -.067 | -.016 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | .099 | -.315* | -.178 | .183 |
| Father's Occupation | -.083 | -.007 | -.298 | .202 |
| Constant | 1.41 | 1.07 | 2.03 | 1.03 |
| Adjusted R Square | .129 | .373 | .157 | .157 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-8: Whether Enrolled in a College Preparatory Curriculum in Grade 9, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | .044* | .018 | .079* | .031* |
| Expected Occupation | -.036 | -.277* | .023 | -.039 |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | .020 | -.047 | -.026 | -.051 |
| Metropolitan Residence | .051 | -.117* | .102 | .091* |
| Unemployment Rate | .018 | .003 | .005 | -.011 |
| Health Problem | | | | |
| Grade Below | .136 | .058 | .007 | -.032 |
| Knowledge of World of Work | .188 | .250* | .210* | .116 |
| Mother Worked for Pay | -.024 | .070 | | |
| Intact Family | -.092 | .137* | .016 | -.014 |
| Father's Education | .0002 | .031* | -.013 | .004 |
| Mother's Education | .008 | -.019* | .043* | -.012 |
| Number of Siblings | .008 | .009 | -.012 | -.009 |
| Farm Background | -.017 | -.015 | -.052 | .003 |
| Foreign Born | .163* | -.509 | .022 | -.200 |
| Parent-Teacher Help and Encouragement | .014 | -.006 | -.028* | .020* |
| Parents' Educational Goal | .132* | .023 | -.190* | .003 |
| Foreign Language | -.050 | -.096 | -.014 | |
| Family Income (000's) | .006 | -.002 | -.0002 | -.005 |
| IQ | | | | |
| Friends in College | .083* | .017 | .054 | -.008 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | -.035 | .163* | .082 | -.189* |
| Father's Occupation | .028 | .054 | .109 | -.038 |
| Constant | -1.03 | -.342 | -1.28 | .160 |
| Adjusted R Square | .246 | .284 | .279 | .220 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-9: Whether Enrolled in a Vocational Curriculum in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | .007 | -.010 | -.009 | -.030* |
| Expected Occupation | -.073* | -.074 | -.292* | -.214* |
| Public School | -.016 | -.007 | -.017 | -.020 |
| Students Per Teacher | .029 | .068 | .155* | -.166 |
| Expenditure Per Pupil | -.004* | -.002 | -.013* | -.022* |
| Southern Residence | .016 | .016 | -.045 | .050 |
| Metropolitan Residence | .0001 | .040 | .009 | -.012 |
| Unemployment Rate | -.001 | .003 | .004 | .001 |
| Health Problem | | | | |
| Grade Below | .046* | -.017 | -.000006 | .000009 |
| Knowledge of World of Work | -.013 | .049 | .104 | .110 |
| Mother Worked for Pay | .082 | -.012 | | |
| Intact Family | .001 | -.030 | -.009 | -.017 |
| Father's Education | .045* | -.014 | -.004 | -.012 |
| Mother's Education | .003 | .003 | -.012 | -.010 |
| Number of Siblings | .060 | -.104* | -.017 | -.022 |
| Farm Background | -.005 | -.006 | .002 | .00005 |
| Foreign Born | -.009 | .047 | -.058 | -.151* |
| Parent-Teacher Help and Encouragement | | | | |
| Parents' Educational Goal | -.020 | -.084 | -.028 | .375* |
| Foreign Language | -.011* | .003 | -.003 | -.0008 |
| Family Income (000's) | -.038* | .018 | .004 | .097* |
| IQ | -.002 | -.002 | -.0008 | .002 |
| Friends in College | -.011* | -.006 | -.032* | -.018 |
| Vocational Curriculum | -.004 | .016 | -.154* | -.253 |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | -.0004 | .001 | -.006* | -.002 |
| Hours Extra-Curricular Activity | .006 | -.019 | -.029* | -.005 |
| Sports | -.020* | -.007 | -.019 | -.004 |
| Math | -.016 | .055 | -.041 | -.108* |
| Attitude Toward High School | -.004 | .017 | .005 | -.020 |
| Mother's Occupation | -.006 | -.009 | .020 | .003 |
| Father's Occupation | -.019 | .006 | -.230* | -.110 |
| Constant | .361 | .127 | 1.23 | 1.34 |
| Adjusted R Square | .056 | .001 | .110 | .062 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-10: Whether Enrolled in a Commercial Curriculum in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | -.053* | -.029* | -.006 | -.0006 |
| Expected Occupation | .091 | .012 | .093* | .142* |
| Public School | .040 | -.014 | -.007 | -.042* |
| Students Per Teacher | -.087 | .002 | .053 | .023 |
| Expenditure Per Pupil | -.004 | -.011 | .003 | .002 |
| Southern Residence | .004 | -.112* | .002 | -.133* |
| Metropolitan Residence | .044 | -.089 | .002 | -.023 |
| Unemployment Rate | .005 | -.012 | -.001 | .005 |
| Health Problem | | | | |
| Grade Below | -.007 | -.040 | .0000005 | -.00001* |
| Knowledge of World of Work | .080 | .070 | .067 | -.080 |
| Mother Worked for Pay | .068 | -.211 | | |
| Intact Family | .012 | -.120* | -.037 | .090* |
| Father's Education | -.048 | -.022 | .0009 | .046 |
| Mother's Education | -.028* | -.028* | -.002 | .0001 |
| Number of Siblings | -.019 | .053 | -.003 | .052 |
| Farm Background | -.019* | -.024* | -.002 | -.008* |
| Foreign Born | -.023 | .049 | -.032 | -.021 |
| Parent-Teacher Help and Encouragement | .070 | .080 | .011 | -.217* |
| Parents' Educational Goal | -.027* | .016 | .007 | .027* |
| Foreign Language | -.026 | -.017 | .011 | -.032 |
| Family Income (000's) | -.001 | -.002 | -.0001 | -.002 |
| IQ | .007 | -.0003 | .011* | .008 |
| Friends in College | -.0004 | -.125 | .039 | .007 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | .003* | .0009 | .0007 | -.0002 |
| Hours Extra-Curricular Activity | .004 | .006 | .004 | -.011 |
| Sports | .043* | .113* | -.011 | -.0004 |
| Math | -.028 | -.033 | .010 | -.069* |
| Attitude Toward High School | -.084* | -.115* | .002 | -.023 |
| Mother's Occupation | .036* | .048* | -.006 | .005 |
| Father's Occupation | .045 | -.078 | .039 | -.049 |
| Constant | .477 | .582 | -.172 | .225 |
| Adjusted R Square | .105 | .137 | -.0001 | .199 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-11: Whether Enrolled in a General Curriculum in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | -.009 | -.014 | -.044* | -.008 |
| Expected Occupation | -.079 | -.368* | -.0008 | .140 |
| Public School | -.010 | .013 | .018 | .019 |
| Students Per Teacher | .071 | -.030 | -.002 | .090 |
| Expenditure Per Pupil | .008* | .012 | .0008 | .020* |
| Southern Residence | .066 | .099 | .041 | .075 |
| Metropolitan Residence | .003 | .081 | -.057 | -.123* |
| Unemployment Rate | .004 | -.013 | -.021* | .0002 |
| Health Problem | | | | |
| Grade Below | -.060 | .243* | .000007 | .000004 |
| Knowledge of World of Work | .003 | .119 | -.262 | -.101 |
| Mother Worked for Pay | -.151 | .313 | | |
| Intact Family | -.020 | .056 | .028 | .134* |
| Father's Education | .062 | -.059 | -.017 | .022 |
| Mother's Education | .005 | .009 | .023* | .062* |
| Number of Siblings | .037 | -.190 | -.030 | -.112 |
| Farm Background | .022* | .011 | -.006 | .013 |
| Foreign Born | .136* | -.127 | .122* | .177* |
| Parent-Teacher Help and Encouragement | -.146* | .069 | .051 | -.294 |
| Parents' Educational Goal | .019* | -.003 | -.013 | -.006 |
| Foreign Language | -.018 | .010 | .021 | .114* |
| Family Income (000's) | -.001 | .004 | .0002 | .008 |
| IQ | .018 | -.014 | .010 | .006 |
| Friends in College | .079 | .353 | .089 | .666 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | -.008* | -.014* | -.002 | -.006* |
| Hours Extra-Curricular Activity | -.054* | .009 | .002 | -.032 |
| Sports | -.018 | -.104* | .042* | .038 |
| Math | .018 | -.113 | .059 | .129* |
| Attitude Toward High School | -.070 | -.032 | .064 | .086 |
| Mother's Occupation | -.018 | -.028 | -.048* | -.081* |
| Father's Occupation | .072 | -.004 | -.056 | .324* |
| Constant | 1.24 | 1.94 | 2.20 | .988 |
| Adjusted R Square | .116 | .213 | .086 | .179 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-12: Whether Enrolled in a College Preparatory Curriculum in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | .056* | .052* | .058* | .037* |
| Expected Occupation | .077 | .419* | .214* | -.070 |
| Public School | -.013 | .010 | .005 | .046* |
| Students Per Teacher | -.001 | -.045 | -.218* | .061 |
| Expenditure Per Pupil | .0007 | .0009 | .009* | -.0005 |
| Southern Residence | -.089* | .001 | .004 | .010 |
| Metropolitan Residence | -.045 | -.031 | .046 | .160* |
| Unemployment Rate | -.007 | .020* | .018* | -.006 |
| Health Problem | | | | |
| Grade Below | .019 | -.173* | -.000001 | .000002 |
| Knowledge of World of Work | -.068 | -.228* | .087 | .071 |
| Mother Worked for Pay | .001 | -.096 | | |
| Intact Family | .007 | .091* | .015 | .058 |
| Father's Education | -.059 | .091* | .019 | -.056 |
| Mother's Education | .018* | .016 | -.008 | -.063* |
| Number of Siblings | -.073 | .235* | .049 | .085 |
| Farm Background | .001 | .018* | .006 | -.005 |
| Foreign Born | -.103* | .027 | -.034 | -.008 |
| Parent-Teacher Help and Encouragement | .096* | -.047 | -.036 | .130 |
| Parents' Educational Goal | .018* | -.016 | .008 | -.020* |
| Foreign Language | .087* | -.007 | -.024 | .049 |
| Family Income (000's) | .005* | .0007 | .0008 | -.008* |
| IQ | -.013 | .020 | .010 | .002 |
| Friends in College | -.076 | -.234 | .105 | -.447 |
| Vocational Curriculum | | | | |
| Commercial Curriculum | | | | |
| College Prep Curriculum | | | | |
| Hours Homework | .006* | .011* | .007* | .009* |
| Hours Extra-Curricular Activity | .052* | .005 | .023 | .050* |
| Sports | -.006 | -.014 | -.011 | -.034* |
| Math | .027 | .088 | -.026 | .049 |
| Attitude Toward High School | .161* | .131* | -.071* | -.049 |
| Mother's Occupation | -.012 | -.010 | .033* | .087* |
| Father's Occupation | -.100* | .056 | .236* | -.167* |
| Constant | -1.09 | -1.59 | -2.23 | -1.62 |
| Adjusted R Square | .311 | .242 | .308 | .313 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-13: Educational Goal in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | | | | |
| Expected Occupation | | | | |
| Public School | .340* | .341* | .499* | .084 |
| Students Per Teacher | -.515* | -.179 | .036 | -.188 |
| Expenditure Per Pupil | -.013 | -.019 | -.019 | .008 |
| Southern Residence | -.112 | .026 | .285* | .429 |
| Metropolitan Residence | -.102 | -.586* | .111 | .364 |
| Unemployment Rate | -.030 | -.038 | .024 | .122* |
| Health Problem | | | | |
| Grade Below | -.027 | .012 | .00001 | -.00003 |
| Knowledge of World of Work | -.160 | .529 | -.436 | .100 |
| Mother Worked for Pay | .175 | -.030 | | |
| Intact Family | .027 | -.200 | -.103 | -.411 |
| Father's Education | -.023 | .059 | .063 | -.181 |
| Mother's Education | .039 | .002 | .036 | .024 |
| Number of Siblings | .408 | .213 | .862* | -.447 |
| Farm Background | -.043 | .006 | -.002 | .009 |
| Foreign Born | -.234 | -.274 | -.276 | -.498 |
| Parent-Teacher Help and Encouragement | .199 | 1.45 | .027 | 1.19 |
| Parents' Educational Goal | .102* | .205* | .074* | .121* |
| Foreign Language | .729* | .987* | .685* | .425* |
| Family Income (000's) | .01 | -.02 | .003 | .03 |
| IQ | .004 | .039 | -.047 | -.049 |
| Friends in College | -.052 | .963 | .265 | -1.37 |
| Vocational Curriculum | .385 | -.388 | -.075 | -.548* |
| Commercial Curriculum | -.440* | -.477* | .017 | .221 |
| College Prep Curriculum | .645* | .818* | 1.17* | 1.01* |
| Hours Homework | .022* | .004 | .017* | .015 |
| Hours Extra-Curricular Activity | .000002 | .008 | .047 | .141 |
| Sports | .024 | .268* | .031 | .217* |
| Math | -.220 | .033 | .124 | -.468 |
| Attitude Toward High School | -.124 | .288 | -.196 | .074 |
| Mother's Occupation | -.018 | .035 | .013 | .046 |
| Father's Occupation | .606* | -.063 | .425* | -.132 |
| Constant | 10.17 | 10.11 | 10.95 | 10.42 |
| Adjusted R Square | .418 | .304 | .356 | .221 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-14: Proportion Female in Expected Occupation in Grade 12, by Race and Sex, Respondents Enrolled in Grades 9 to 12 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | | | | |
| Expected Occupation | | | | |
| Public School | -.044* | -.007 | .020* | .034* |
| Students Per Teacher | -.100 | .038 | .017 | .078 |
| Expenditure Per Pupil | -.003 | -.014* | -.007* | -.0009 |
| Southern Residence | -.033 | .0005 | -.018 | -.017 |
| Metropolitan Residence | -.020 | .057* | -.005 | .036 |
| Unemployment Rate | -.005 | -.015* | .006 | .014* |
| Health Problem | | | | |
| Grade Below | .016 | .133* | .000001 | .000005 |
| Knowledge of World of Work | -.073 | .143* | -.180* | .014 |
| Mother Worked for Pay | .046 | .073 | | |
| Intact Family | -.009 | -.048* | .049* | -.003 |
| Father's Education | -.054 | -.006 | -.008 | -.076* |
| Mother's Education | -.022* | -.020* | .002 | -.004 |
| Number of Siblings | -.030 | -.042 | .026 | .096 |
| Farm Background | .003 | -.011* | .001 | .004 |
| Foreign Born | .001 | .016 | .005 | -.078* |
| Parent-Teacher Help and Encouragement | -.015 | .101 | .012 | .283* |
| Parents' Educational Goal | -.003 | -.010 | -.006 | .007 |
| Foreign Language | -.033 | .018 | .036* | .067* |
| Family Income (000's) | -.002 | -.002 | .002* | -.0005 |
| IQ | -.017* | -.031* | -.014* | .010 |
| Friends in College | -.011 | .066 | -.044 | -.149 |
| Vocational Curriculum | -.112* | -.023 | -.066* | -.087* |
| Commercial Curriculum | .060* | .050 | .067* | .132* |
| College Prep Curriculum | .024 | .153* | .072* | -.026 |
| Hours Homework | -.001 | -.008* | -.003* | -.0006 |
| Hours Extra-Curricular Activity | -.005 | -.016 | -.013 | .020 |
| Sports | -.021 | .018 | -.002 | -.021* |
| Math | -.003 | .045 | -.031 | -.022 |
| Attitude Toward High School | -.049* | -.046 | .018 | .025 |
| Mother's Occupation | .020* | .016 | -.008 | -.014 |
| Father's Occupation | .002 | -.0003 | -.088* | -.002 |
| Constant | 1.59 | 1.60 | 1.05 | .025 |
| Adjusted R Square | .105 | .241 | .096 | .108 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-15: Change Between Grades 9 and 12 in Educational Goal, by Race and Sex, Respondents Enrolled in Grades 7 to 9 in 1966/68: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Educational Goal | -.934* | -.880* | -.669* | -.800* |
| Expected Occupation | -1.08* | -3.06* | .842 | -1.00* |
| Public School | | | | |
| Students Per Teacher | | | | |
| Expenditure Per Pupil | | | | |
| Southern Residence | -.153 | -.882 | .307 | .806* |
| Metropolitan Residence | -.078 | -.563* | -.013 | 1.313* |
| Unemployment Rate | .027 | .165* | .114 | .146* |
| Health Problem | | | | |
| Grade Below | .338 | .096 | .330 | -.633* |
| Knowledge of World of Work | .793* | 1.85* | -.166 | .236 |
| Mother Worked for Pay | .217 | .657* | | |
| Intact Family | -.301 | .552 | -.022 | -1.11* |
| Father's Education | .059 | -.072 | .049 | -.088 |
| Mother's Education | .057 | -.009 | -.003 | .041 |
| Number of Siblings | .045 | .032 | .015 | .087* |
| Farm Background | .522 | .008 | .161 | .054 |
| Foreign Born | .071 | 1.92 | .018 | 2.12 |
| Parent-Teacher Help and Encouragement | .122* | .323* | -.081 | .447* |
| Parents' Educational Goal | 1.09* | .784* | 1.34* | .913* |
| Foreign Language | .279 | .127 | 1.46* | |
| Family Income (000's) | -.001 | .07 | .04 | .06 |
| IQ | | | | |
| Friends in College | .519* | .714* | .497* | .112 |
| Vocational Curriculum | .286 | -.512 | .271 | -1.02* |
| Commercial Curriculum | -.288 | -1.37* | -1.49 | 3.26* |
| College Prep Curriculum | .064 | -.610 | .761* | -.336 |
| Hours Homework | | | | |
| Hours Extra-Curricular Activity | | | | |
| Sports | | | | |
| Math | | | | |
| Attitude Toward High School | | | | |
| Mother's Occupation | .829* | 2.442* | -.692 | -.700 |
| Father's Occupation | .221 | 1.09* | 1.08 | -1.17 |
| Constant | 8.524 | 7.31 | 6.21 | 6.553 |
| Adjusted R Square | .562 | .652 | .303 | .625 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-16: Definitions, Means, and Standard Deviations of Variables Used in Analysis of Respondents Not Enrolled in 1966/68, by Race and Sex [a,b]

| Variable | Definition | White Women Mean | White Women Standard Deviation | Black Women Mean | Black Women Standard Deviation | White Men Mean | White Men Standard Deviation | Black Men Mean | Black Men Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|
| Vocational | Respondent's high school curriculum (dummy variables each coded: 1=yes, 0=no). | .02 | .16 | .04 | .19 | .15 | .36 | .17 | .38 |
| Commercial | | .35 | .48 | .17 | .38 | .04 | .20 | .03 | .17 |
| College Prep. | | .13 | .33 | .10 | .30 | .12 | .32 | .06 | .25 |
| General | | .50 | .50 | .69 | .46 | .69 | .46 | .74 | .44 |
| Southern Residence $t_{15}$ | Respondent lives in the South at $t_1$ (1=yes). | .31 | .46 | .56 | .50 | .31 | .46 | .65 | .48 |
| $t_{17}$ | | .33 | .47 | .56 | .50 | .33 | .47 | .67 | .47 |
| $t_{22}$ | | .38 | .49 | .63 | .48 | .31 | .46 | .67 | .47 |
| Metropolitan Residence $t_{15}$ | Respondent lives in an SMSA at $t_1$ (1=yes). | .58 | .49 | .69 | .46 | .58 | .49 | .66 | .47 |
| $t_{17}$ | | .62 | .49 | .68 | .47 | .57 | .50 | .65 | .48 |
| $t_{22}$ | | .63 | .48 | .67 | .47 | .55 | .50 | .69 | .47 |
| Unemployment Rate $t_{15}$ | Unemployment rate in labor market of residence at $t_1$ in percentage points. | 4.70 | 1.98 | 5.23 | 2.07 | 4.46 | 1.79 | 4.88 | 1.93 |
| $t_{17}$ | | 5.09 | 2.14 | 5.66 | 2.38 | 4.78 | 1.95 | 5.16 | 1.95 |
| $t_{22}$ | | 7.00 | 2.84 | 7.12 | 2.95 | 5.75 | 2.74 | 6.51 | 3.00 |
| Occupation $t_{15}$ | Proportion female in respondent's occupation at $t_1$ (1970 Census data). | .74 | .27 | .69 | .27 | .18 | .22 | .18 | .21 |
| $t_{17}$ | | .74 | .27 | .69 | .27 | .16 | .20 | .19 | .24 |
| $t_{22}$ | | .74 | .28 | .68 | .28 | .13 | .18 | .18 | .20 |
| Employed $t_{15}$ | Respondent's employment status at $t_1$ (1= employed). | .56 | .50 | .48 | .50 | .95 | .22 | .86 | .34 |
| $t_{17}$ | | .50 | .50 | .51 | .50 | .95 | .21 | .89 | .31 |
| $t_{22}$ | | .45 | .50 | .57 | .50 | .97 | .18 | .89 | .31 |
| Wage $t_{15}$ | Respondent's hourly wage at current or last job at $t_1$. | 2.82 | .96 | 2.34 | 1.35 | 4.21 | 1.58 | 3.32 | 1.80 |
| $t_{17}$ | | 2.90 | 1.07 | 2.71 | 1.25 | 4.66 | 2.12 | 3.51 | 1.44 |
| $t_{22}$ | | 3.14 | 1.28 | 2.74 | 1.42 | 5.71 | 2.43 | 4.11 | 1.56 |
| Log Wage $t_{15}$ | Natural log of respondent's hourly wage. | .98 | .44 | .83 | .45 | 1.37 | .36 | 1.09 | .45 |
| $t_{17}$ | | .98 | .43 | .90 | .48 | 1.47 | .38 | 1.18 | .38 |
| $t_{22}$ | | 1.06 | .45 | .90 | .47 | 1.66 | .40 | 1.34 | .41 |
| Marital Status $t_{15}$ | Respondent is married, living with spouse at $t_1$. | .71 | .46 | .49 | .50 | .60 | .49 | .33 | .48 |
| $t_{17}$ | | .80 | .36 | .51 | .50 | .73 | .45 | .54 | .50 |
| $t_{22}$ | | .84 | .36 | .57 | .50 | .83 | .38 | .62 | .49 |
| Work Experience $t_{15}$ | Number of years respondent has worked since age 18 at $t_1$. | 2.09 | 1.61 | 1.93 | 1.84 | 3.93 | 1.24 | 3.94 | 2.30 |
| $t_{17}$ | | 3.10 | 2.13 | 2.70 | 2.32 | 5.76 | 1.30 | 5.79 | 1.46 |
| $t_{22}$ | | 4.65 | 3.20 | 4.52 | 3.37 | 9.61 | 1.37 | 9.60 | 1.48 |
| Unemployment Experience $t_{15}$ | Number of weeks respondent was unemployed last year at $t_1$. | 1.46 | 4.83 | 3.53 | 7.97 | 1.61 | 5.50 | 4.37 | 10.08 |
| $t_{17}$ | | 1.33 | 5.01 | 2.94 | 8.05 | 2.05 | 6.52 | 3.50 | 7.95 |
| $t_{22}$ | | 1.22 | 5.01 | 2.75 | 7.90 | 1.49 | 5.27 | 3.68 | 8.69 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Health Problem $t_{15}$ | Respondent has a health problem at $t_1$ that limits work (1=yes). | .09 | .29 | .09 | .28 | .11 | .31 | .09 | .29 |
| $t_{17}$ | | .08 | .28 | .07 | .26 | .10 | .30 | .11 | .31 |
| $t_{22}$ | | .09 | .29 | .08 | .28 | .06 | .24 | .09 | .29 |
| Divorced $t_{15}$ | Respondent has ever been divorced at $t_1$ (1=yes). | .08 | .26 | .15 | .35 | .05 | .22 | .08 | .27 |
| $t_{17}$ | | .12 | .32 | .20 | .40 | .07 | .25 | .11 | .31 |
| $t_{22}$ | | .17 | .38 | .26 | .44 | .13 | .33 | .25 | .43 |
| High School Grad $t_{15}$ | Respondent graduated from high school or received GED at $t_1$ (1=yes). | .74 | .44 | .56 | .50 | .59 | .49 | .37 | .49 |
| $t_{17}$ | | .76 | .43 | .57 | .50 | .65 | .48 | .46 | .50 |
| $t_{22}$ | | .80 | .40 | .59 | .49 | .70 | .47 | .50 | .50 |
| Other Family Income $t_{15}$ | Total household income[c] minus respondent's earnings last year at $t_1$. | 8810 | 6566 | 6772 | 5929 | 6383 | 7334 | 4158 | 5183 |
| $t_{17}$ | | 8966 | 5789 | 5552 | 5657 | 4837 | 5926 | 3980 | 5070 |
| $t_{22}$ | | 9232 | 6132 | 5409 | 4664 | 3817 | 5111 | 3415 | 4318 |
| Training $t_{15}$ | Respondent received occupational training, including military training, in $t_1$ (1=yes). | .19 | .39 | .18 | .38 | .34 | .47 | .18 | .38 |
| $t_{17}$ | | .16 | .37 | .17 | .38 | .30 | .46 | .18 | .38 |
| $t_{22}$ | | .12 | .33 | .12 | .33 | .23 | .42 | .17 | .38 |
| Annual Hours $t_{15}$ | Number of hours respondent worked last year at $t_1$. | 1044 | 909 | 910 | 857 | 1960 | 730 | 1696 | 816 |
| $t_{17}$ | | 977 | 918 | 942 | 911 | 1977 | 757 | 1814 | 724 |
| $t_{22}$ | | 719 | 883 | 976 | 936 | 2030 | 756 | 1788 | 712 |
| Number of Children $t_{15}$ | Number of respondent's children at $t_1$. | .69 | .80 | 1.21 | 1.06 | .48 | .79 | .52 | .90 |
| $t_{17}$ | | 1.10 | .98 | 1.59 | 1.28 | .77 | .94 | .81 | 1.16 |
| $t_{22}$ | | 1.79 | 1.14 | 2.24 | 1.62 | .92 | 1.18 | .81 | 1.36 |
| Birth Cohort | Respondent's birth cohort (1=1940-44, 2=1945-49, 3=1950-54, 4=1955-59). | 1.99 | .55 | 2.07 | .57 | 2.06 | .62 | 2.23 | .62 |
| Knowledge of the World of Work | Percentage of occupations respondent was able to correctly identify by the tasks associated with them (four items). | .74 | .22 | .60 | .25 | .74 | .25 | .57 | .27 |
| Worked in High School | Respondent worked in the last year of high school. | .33 | .47 | .23 | .42 | .45 | .50 | .36 | .48 |
| Mother Worked | Respondent's mother worked for pay while respondent was growing up (1=yes). | .33 | .47 | .48 | .50 | NA | NA | NA | NA |
| Intact Family | Respondent lived with both natural parents at age 14 (1=yes). | .82 | .38 | .56 | .50 | .85 | .60 | .56 | .50 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Parental Socioeconomic Status | An index composed of three variables: occupation of head of household when respondent was 14, mother's education, and father's education - standardized to have a mean of 10 and a standard deviation of 3. | 9.86 | 2.09 | 8.09 | 1.91 | 9.70 | 2.06 | 8.08 | 1.92 |
| Mother's Occupation | Proportion female in the occupation held by respondent's mother when the former was growing up. | .65 | .29 | .76 | .30 | .57 | .32 | .72 | .32 |
| Father's Occupation | Proportion of females in the occupation held by respondent's father when the former was growing up. | .15 | .22 | .27 | .35 | .11 | .15 | .12 | .17 |
| Number of Siblings | The number of respondent's siblings. | 3.07 | 2.24 | 4.96 | 2.78 | 3.15 | 2.29 | 4.85 | 3.02 |
| Farm Background | Respondent lived on a farm at age 14. | .15 | .36 | .18 | .38 | .26 | .44 | .24 | .43 |
| Foreign-born | Respondent's parents or grandparents were born outside the U.S. and Canada. | .30 | .46 | .02 | .13 | .29 | .46 | .02 | .13 |
| Parent Help | Proportion of respondents receiving much help and encouragement from parents to go past high school (three items). | .22 | .32 | .23 | .31 | .21 | .32 | .26 | .33 |
| Teacher Encouragement | Percent receiving much encouragement from teachers to continue past high school (one item). | .27 | .44 | .35 | .48 | .21 | .41 | .32 | .47 |
| Parent's Educational Goal | Respondent's parents wanted her/him to continue past high school (1=yes). | .28 | .45 | .33 | .47 | .28 | .45 | .28 | .45 |
| Foreign Language | Respondent spoke a language other than English in the home while growing up (1= yes). | .14 | .35 | .02 | .14 | .06 | .24 | .02 | .14 |
| Friends in College | Number of respondent's friends attending or planning to go to college. | 1.65 | .76 | 1.54 | .71 | 1.56 | .72 | 1.57 | .74 |
| IQ | Respondent's score on standard IQ test. | 100 | 12 | 87 | 13 | 96 | 12 | 82 | 13 |

| Variable | Definition | White Women Mean | White Women Standard Deviation | Black Women Mean | Black Women Standard Deviation | White Men Mean | White Men Standard Deviation | Black Men Mean | Black Men Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|
| Hours in Homework | Hours respondent spent per week on homework while in high school. | 2.38 | 1.15 | 2.38 | 1.11 | 1.81 | 1.07 | 2.05 | 1.09 |
| Hours in Extra-curricular Activities | Hours respondent spent per week in extracurricular activities while in high school. | 1.62 | .90 | 1.73 | .86 | 2.50 | 1.15 | 2.39 | 1.14 |
| Sports | Respondent's favorite extra-curricular activity in high school was sports (1=yes). | .30 | .46 | .36 | .48 | .76 | .43 | .78 | .42 |
| Work | The main non-school related activity at which respondent spent the last year in high school was working for pay (1=yes). | .19 | .39 | .12 | .32 | .34 | .47 | .28 | .45 |
| Math Favorite | Respondent's favorite high school subject was math (1=yes). | .11 | .31 | .15 | .36 | .25 | .43 | .31 | .46 |
| Attitude Toward High School | Respondent's attitude toward the high school experience (1= liked it a lot). | .48 | .50 | .57 | .50 | .35 | .48 | .46 | .50 |
| Public School | Respondent attended a public high school (1=yes). | .94 | .24 | .98 | .13 | .96 | .20 | .99 | .11 |
| Students Per Teacher | Student/faculty ratio in respondents high school. | 21 | 6 | 21 | 4 | 20 | 6 | 22 | 4 |
| Per Pupil Expenditure | Dollar expenditure per pupil in school district, adjusted for regional cost-of-living differences. | 868 | 252 | 824 | 228 | 978 | 277 | 935 | 248 |
| Child Under 6 $t_{15}$ | Respondent has a child under 6 at $t_i$ (1=yes). | .49 | .50 | .70 | .46 | .34 | .47 | .30 | .46 |
| $t_{17}$ | | .66 | .48 | .73 | .45 | .48 | .50 | .40 | .49 |
| $t_{22}$ | | .69 | .46 | .64 | .48 | .43 | .50 | .34 | .48 |
| Job Satisfaction $t_{15}$ | Respondent's job satisfaction at $t_i$ (1=very satisfied). | .60 | .49 | .49 | .50 | .49 | .50 | .34 | .47 |
| $t_{17}$ | | .56 | .50 | .46 | .50 | .49 | .50 | .40 | .49 |
| $t_{22}$ | | .52 | .50 | .46 | .50 | .48 | .50 | .42 | .50 |
| Expected Occupation $t_{15}$ | Proportion female in the occupation in which the respondent expected at $t_i$ to be employed at age 30/35.[1] | .76 | .26 | .80 | .24 | .15 | .19 | .15 | .22 |
| $t_{17}$ | | .74 | .27 | .80 | .23 | .14 | .18 | .15 | .21 |
| $t_{22}$ | | .72 | .29 | .77 | .27 | .13 | .18 | .11 | .18 |
| Change in Occupation $t_{15}$-$t_{17}$ | Difference between proportion female in respondent's occupation at $t_i$ and $t_j$. | .006 | .26 | .007 | .27 | -.03 | .23 | -.03 | .25 |
| $t_{17}$-$t_{22}$ | | -.01 | .28 | .007 | .31 | -.04 | .21 | -.02 | .27 |

| Variable | Definition | White Women | | Black Women | | White Men | | Black Men | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation | Mean | Standard Deviation |
| Change in Wage $t_{15}-t_{17}$ | Change in hourly wage | .20 | 1.04 | .36 | 1.32 | .72 | 2.24 | .45 | 1.67 |
| $t_{17}-t_{22}$ | $t_i$ to $t_j$. | .46 | 1.30 | .24 | 1.10 | 1.15 | 1.92 | .71 | 1.34 |
| Change in Work Experience $t_{15}-t_{17}$ | Change in years worked | 1.04 | .90 | .90 | .87 | 2.00 | 0.0 | 2.00 | 0.0 |
| $t_{17}-t_{22}$ | $t_i$ to $t_j$. | 1.71 | 1.51 | 1.99 | 1.53 | 4.00 | 0.0 | 4.00 | 0.0 |
| Birth $t_{15}-t_{17}$ | Bore a child between $t_i$ | .14 | .35 | .07 | .26 | .14 | .35 | .07 | .26 |
| $t_{17}-t_{22}$ | and $t_j$ (1=yes). | .13 | .34 | .09 | .29 | .12 | .33 | .12 | .33 |
| Married $t_{15}-t_{17}$ | Married between $t_i$ and | .07 | .26 | .09 | .29 | .17 | .38 | .16 | .37 |
| $t_{17}-t_{22}$ | $t_j$ (1=yes). | .03 | .18 | .05 | .22 | .16 | .37 | .12 | .32 |

[a]This table is based on unweighted data, as blacks and whites are analyzed separately.

[b]$t_{15}$ refers to 3 years after high school, $t_{17}$ to 5 years after high school, $t_{22}$ to 10 years after high school, when respondent is 21, 23 and 27, respectively.

[c]Business, interest, dividends, unemployment, wages and other.

Table C-17: Whether Married Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .107 | .009 | .142 | -.468 |
| Students Per Teacher | -.004 | -.004 | .009* | -.015 |
| Expenditure Per Pupil | -.0002* | .00007 | .0001 | -.0005* |
| Southern Residence | .096* | .105 | .079 | .076 |
| Metropolitan Residence | -.036 | -.071 | -.009 | .087 |
| Unemployment Rate | .009 | .014 | .007 | .005 |
| Health Problem | .080 | -.266* | -.080 | -.194 |
| Birth Cohort | -.030 | -.071 | -.031 | .044 |
| Knowledge of World of Work | .073 | .102 | -.080 | -.301* |
| Mother Worked for Pay | .061 | -.003 | | |
| Intact Family | .023 | .060 | -.032 | .064 |
| Parental Socioeconomic Status | .010 | .002 | -.004 | .026 |
| Number of Siblings | .008 | -.022 | -.014 | -.003 |
| Farm Background | .028 | -.056 | -.100 | .050 |
| Foreign-born | -.044 | -.509* | -.132* | .102 |
| Parental Help | .048 | .061 | .001 | .137 |
| Parents' Educational Goal | .004 | .076 | .046 | -.046 |
| Foreign Language | .008 | .568* | -.116 | .323 |
| Other Family Income (000's) | | | | |
| IQ | .003* | -.005* | .003 | .004 |
| Worked in High School | -.041 | .069 | .110* | .020 |
| Friends in College | -.023 | -.022 | .022 | -.125* |
| Vocational Curriculum | -.109 | -.024 | .059 | -.080 |
| Commercial Curriculum | -.057 | .003 | -.006 | .024 |
| College Preparatory Curriculum | -.114 | .094 | -.167* | -.024 |
| Hours Spent in Homework | .016 | .066* | -.029 | -.010 |
| Hours in Extracurricular Activities | -.008 | -.108* | -.055* | .069* |
| Sports | -.092* | .237* | -.134* | .038 |
| Work | | | | |
| Math | -.007 | -.150 | -.048 | .019 |
| Attitude Toward High School | -.024 | -.078 | .025 | .105 |
| Teacher Encouragement | .034 | .098 | .044 | .128 |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .390 | 1.02 | .346 | .938 |
| Adjusted R Square | .043 | .083 | .059 | .052 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-18: Whether Married Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression[1]

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .040 | -.392 | -.053 | -.573* |
| Students Per Teacher | -.006* | .012 | .004 | -.005 |
| Expenditure Per Pupil | -.00005 | .0002 | .00005 | -.00007 |
| Southern Residence | .036 | .116 | .056 | .158* |
| Metropolitan Residence | -.036 | .002 | -.008 | .075 |
| Unemployment Rate | .0001 | -.009 | -.021* | .012 |
| Health Problem | -.005 | -.010 | -.226* | -.256* |
| Birth Cohort | -.049* | -.119* | -.072* | -.037 |
| Knowledge of World of Work | .004 | .135 | .107 | -.006 |
| Mother Worked for Pay | .040 | -.061 | | |
| Intact Family | .104* | .026 | -.023 | .136* |
| Parental Socioeconomic Status | -.013* | .004 | -.006 | .005 |
| Number of Siblings | .005 | -.007 | .0004 | -.001 |
| Farm Background | .051 | .007 | -.063 | .010 |
| Foreign-born | .016 | -.177 | -.089* | -.179 |
| Parental Help | -.055 | .129 | .012 | -.228* |
| Parents' Educational Goal | -.015 | .125* | .024 | -.107 |
| Foreign Language | .029 | .180 | -.008 | .313 |
| Other Family Income (000's) | | | | |
| IQ | .002* | -.005* | .0003 | .003 |
| Worked in High School | -.012 | .009 | .050 | .019 |
| Friends in College | -.010 | -.015 | -.017 | .006 |
| Vocational Curriculum | -.031 | .139 | -.004 | .138 |
| Commercial Curriculum | -.014 | -.120 | -.037 | -.065 |
| College Preparatory Curriculum | -.043 | .064 | -.039 | .089 |
| Hours Spent in Homework | -.011 | .036 | -.024 | -.009 |
| Hours in Extracurricular Activities | -.010 | -.075* | .0006 | .033 |
| Sports | -.057* | -.102 | -.010 | -.140 |
| Work | | | | |
| Math | .035 | .067 | -.010 | -.019 |
| Attitude Toward High School | .006 | .016 | .013 | .128* |
| Teacher Encouragement | .056 | .020 | .056 | -.001 |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .881 | 1.12 | .938 | .884 |
| Adjusted R Square | .030 | .065 | .038 | .038 |

[1] Metric coefficients; * means coefficient is twice its standard error.

Table C-19: Whether Married Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.004 | .306 | -.051 | -.571 |
| Students Per Teacher | -.002 | -.0006 | -.003 | -.009 |
| Expenditure Per Pupil | -.00006 | -.0001 | .000005 | -.0002 |
| Southern Residence | .046 | .062 | -.011 | .106 |
| Metropolitan Residence | -.019 | -.113 | .025 | .012 |
| Unemployment Rate | -.003 | .006 | -.014* | -.017 |
| Health Problem | -.063 | .025 | -.032 | .041 |
| Birth Cohort | -.020 | .010 | -.013 | .069 |
| Knowledge of World of Work | -.003 | .069 | .065 | .130 |
| Mother Worked for Pay | .010 | .124 | | |
| Intact Family | .068* | .003 | .002 | .024 |
| Parental Socioeconomic Status | -.013 | .030 | -.007 | -.037 |
| Number of Siblings | -.004 | -.004 | .0009 | -.005 |
| Farm Background | .038 | -.035 | -.006 | .158 |
| Foreign-born | -.041 | .067 | -.074* | .225 |
| Parental Help | -.011 | -.040 | .055 | -.032 |
| Parents' Educational Goal | -.024 | -.058 | .064 | -.004 |
| Foreign Language | -.045 | .180 | -.065 | .058 |
| Other Family Income (000's) | | | | |
| IQ | .002 | -.002 | -.015 | .003 |
| Worked in High School | -.010 | .025 | .037 | .029 |
| Friends in College | .007 | -.120* | -.036 | -.008 |
| Vocational Curriculum | -.034 | .182 | .007 | -.072 |
| Commercial Curriculum | .027 | .041 | .023 | .122 |
| College Preparatory Curriculum | -.013 | -.099 | -.011 | -.143 |
| Hours Spent in Homework | .0006 | .008 | -.020 | -.052 |
| Hours in Extracurricular Activities | .008 | -.069 | -.015 | -.075* |
| Sports | -.013 | -.105 | -.016 | .098 |
| Work | | | | |
| Math | -.054 | -.068 | -.013 | .010 |
| Attitude Toward High School | -.014 | .061 | -.012 | .184* |
| Teacher Encouragement | .026 | .111 | .049 | .005 |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .926 | .531 | 1.30 | 1.46 |
| Adjusted R Square | .012 | .014 | .004 | .086 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-20: Number of Children Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex; Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .074 | -.303 | .108 | -1.33* |
| Students Per Teacher | -.007 | -.013 | -.005 | -.041* |
| Expenditure Per Pupil | -.00004 | -.00008 | -.0001 | -.001* |
| Southern Residence | .019 | .296 | .017 | -.048 |
| Metropolitan Residence | -.031 | .226 | .109 | .402* |
| Unemployment Rate | .002 | .026 | -.015 | .028 |
| Health Problem | -.015 | -.313 | -.114 | -.228 |
| Birth Cohort | .118* | .236* | -.101 | .144 |
| Knowledge of World of Work | -.124 | -.300 | -.285 | -.343 |
| Mother Worked for Pay | .096 | -.026 | | |
| Intact Family | -.253* | -.386* | -.024 | .255* |
| Parental Socioeconomic Status | .013 | -.008 | -.009 | -.028 |
| Number of Siblings | .021 | -.045 | .008 | -.036 |
| Farm Background | .128 | -.029 | -.053 | .198 |
| Foreign-born | -.015 | -.813 | -.244* | .049 |
| Parental Help | .080 | -.131 | -.108 | -.140 |
| Parents' Educational Goal | .081 | .127 | .001 | -.131 |
| Foreign Language | .016 | .930 | -.131 | .394 |
| Other Family Income (000's) | | | | |
| IQ | .003 | -.011* | .006 | .0006 |
| Worked in High School | -.084 | -.020 | .118 | .172 |
| Friends in College | -.118* | -.221* | -.010 | -.113 |
| Vocational Curriculum | .247 | .033 | .104 | -.044 |
| Commercial Curriculum | -.240* | -.184 | .210 | -.076 |
| College Preparatory Curriculum | -.246* | .136 | .093 | .151 |
| Hours Spent in Homework | -.012 | -.048 | -.038 | -.093 |
| Hours in Extracurricular Activities | .009 | -.032 | -.032 | .180* |
| Sports | -.039 | .340* | -.109 | -.209 |
| Work | | | | |
| Math | .058 | -.041 | -.084 | .022 |
| Attitude Toward High School | -.110 | -.174 | -.092 | .0008 |
| Teacher Encouragement | -.00003 | .131 | -.003 | .289* |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .707 | 2.50 | .893 | 3.68 |
| Adjusted R Square | .064 | .092 | .007 | .084 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-21: Number of Children Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .178 | -.986 | .039 | -1.67* |
| Students Per Teacher | -.008 | -.007 | -.003 | -.019 |
| Expenditure Per Pupil | -.0002 | .0004 | .00005 | -.0003 |
| Southern Residence | -.030 | .271 | .016 | .485* |
| Metropolitan Residence | -.101 | -.158 | .109 | .115 |
| Unemployment Rate | .009 | -.020 | -.017 | .040 |
| Health Problem | .225* | .098 | -.476* | .088 |
| Birth Cohort | .031 | .192 | -.418* | -.426* |
| Knowledge of World of Work | -.180 | -.300 | .017 | .103 |
| Mother Worked for Pay | .202* | -.228 | | |
| Intact Family | -.224* | -.284* | -.032 | .095 |
| Parental Socioeconomic Status | -.014 | -.008 | -.013 | .063 |
| Number of Siblings | .034* | -.079* | .011 | -.003 |
| Farm Background | .021 | -.127 | -.079 | .129 |
| Foreign-born | -.095 | -.610 | -.244* | .201 |
| Parental Help | .128 | -.100 | .035 | -.027 |
| Parents' Educational Goal | .045 | -.033 | .114 | -.283 |
| Foreign Language | .114 | .181 | -.013 | 1.01* |
| Other Family Income (000's) | | | | |
| IQ | .003 | -.014* | .003 | .008 |
| Worked in High School | -.060 | .158 | .093 | .279 |
| Friends in College | -.107* | -.216* | -.004 | -.029 |
| Vocational Curriculum | .018 | -.038 | .098 | .087 |
| Commercial Curriculum | -.121 | -.157 | -.220 | -.064 |
| College Preparatory Curriculum | -.089 | -.033 | -.130 | .116 |
| Hours Spent in Homework | -.041 | -.060 | -.092* | .047 |
| Hours in Extracurricular Activities | -.013 | -.107 | -.0006 | -.108 |
| Sports | .056 | .518* | -.088 | -.119 |
| Work | | | | |
| Math | .138 | -.007 | .073 | .075 |
| Attitude Toward High School | -.208* | -.046 | -.063 | .093 |
| Teacher Encouragement | .026 | .162 | -.005 | -.137 |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | 1.58 | 4.71 | 1.74 | 2.45 |
| Adjusted R Square | .061 | .102 | .107 | .085 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-22: Number of Children Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .251 | .041 | -.300 | -.223 |
| Students Per Teacher | .003 | .032 | .003 | .030 |
| Expenditure Per Pupil | -.0001 | -.0007 | .0001 | -.00009 |
| Southern Residence | -.251* | -.143 | -.025 | .182 |
| Metropolitan Residence | -.096 | -.243 | -.024 | -.161 |
| Unemployment Rate | -.006 | -.001 | -.038 | -.008 |
| Health Problem | .163 | .079 | -.247 | .530 |
| Birth Cohort | -.223* | -.165 | -.529* | -.519* |
| Knowledge of World of Work | -.387 | -.839* | .138 | .305 |
| Mother Worked for Pay | .202* | -.058 | | |
| Intact Family | -.468 | -.199 | -.139 | -.040 |
| Parental Socioeconomic Status | -.021 | .031 | -.024 | .029 |
| Number of Siblings | .055* | -.060 | .031 | .016 |
| Farm Background | .007 | -.642* | -.094 | .492* |
| Foreign-born | -.104 | -1.17 | -.199 | .150 |
| Parental Help | -.150 | .022 | .125 | .475 |
| Parents' Educational Goal | .214* | .294 | .028 | -.218 |
| Foreign Language | -.133 | -.598 | .100 | -.390 |
| Other Family Income (000's) | | | | |
| IQ | .004 | -.005 | -.003 | .011 |
| Worked in High School | .027 | -.358 | .175* | .051 |
| Friends in College | .013 | -.265 | .013 | -.015 |
| Vocational Curriculum | -.177 | .408 | .086 | -.064 |
| Commercial Curriculum | -.039 | -.243 | .044 | -.288 |
| College Preparatory Curriculum | .045 | .133 | .221 | .163 |
| Hours Spent in Homework | -.043 | -.065 | -.082 | .092 |
| Hours in Extracurricular Activities | -.016 | -.085 | -.050 | -.117 |
| Sports | .007 | .588* | .043 | .278 |
| Work | | | | |
| Math | -.058 | -.262 | .073 | .328 |
| Attitude Toward High School | -.098 | -.191 | -.077 | -.127 |
| Teacher Encouragement | -.041 | .105 | -.144 | -.186 |
| Number of Children | | | | |
| Marital Status | | | | |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | 2.25 | 4.59 | 3.02 | -.015 |
| Adjusted R Square | .022 | .064 | .122 | .094 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-23: Whether Graduated Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.024 | .206 | .086 | .035 |
| Students Per Teacher | .003 | -.006 | -.007 | .012 |
| Expenditure Per Pupil | .00010 | -.0003* | -.00001 | -.00008 |
| Southern Residence | -.024 | -.077 | -.029 | -.029 |
| Metropolitan Residence | -.048 | .028 | -.066 | .070 |
| Unemployment Rate | -.001 | .007 | -.007 | -.011 |
| Health Problem | -.156* | -.117 | -.079 | .038 |
| Birth Cohort | -.154* | -.232* | -.062 | .010 |
| Knowledge of World of Work | .331* | .305* | .214* | .217 |
| Mother Worked for Pay | -.003 | .073 | | |
| Intact Family | .142* | .095 | .038 | .203* |
| Parental Socioeconomic Status | .023* | .036* | .027* | .062* |
| Number of Siblings | -.002 | -.012 | -.013 | -.009 |
| Farm Background | .167* | -.017 | .064 | .051 |
| Foreign-born | -.013 | -.173 | -.043 | .015 |
| Parental Help | -.079 | -.034 | -.049 | -.395* |
| Parents' Educational Goal | .070* | .139* | .120* | .195* |
| Foreign Language | .042 | -.149 | .021 | .165 |
| Other Family Income (000's) | .003 | .003 | .0006 | .01 |
| IQ | .002 | -.002 | .011* | .002 |
| Worked in High School | .067* | .104 | .153* | .170* |
| Friends in College | .035* | .061 | .075* | -.072 |
| Vocational Curriculum | -.073 | .030 | .169* | .180* |
| Commercial Curriculum | .049 | .009 | .216* | -.118 |
| College Preparatory Curriculum | -.027 | .205* | .095 | -.013 |
| Hours Spent in Homework | .019 | .092* | .036 | .059* |
| Hours in Extracurricular Activities | .025 | -.043 | -.038 | .042 |
| Sports | -.065* | -.098 | -.147* | -.269* |
| Work | -.002 | -.041 | -.045 | .002 |
| Math | -.135* | -.101 | -.138* | -.173* |
| Attitude Toward High School | .096* | .196* | .196* | .208* |
| Teacher Encouragement | .015 | -.044 | -.085 | -.013 |
| Number of Children | -.189* | -.110* | -.108* | -.063 |
| Marital Status | .007 | -.023 | .007 | .113 |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .096 | .711 | -.631 | -.786 |
| Adjusted R Square | .413 | .438 | .346 | .333 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-24: Whether Graduated Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.018 | .079 | .017 | .318 |
| Students Per Teacher | -.0002 | -.005 | -.004 | .003 |
| Expenditure Per Pupil | .000001 | -.0003* | -.00008 | -.0003* |
| Southern Residence | -.085* | -.077 | -.059 | -.114 |
| Metropolitan Residence | .043 | .063 | -.030 | .051 |
| Unemployment Rate | -.005 | -.003 | -.001 | .010 |
| Health Problem | -.017 | -.118 | -.057 | .010 |
| Birth Cohort | -.094* | -.124* | -.040 | .042 |
| Knowledge of World of Work | .250* | .218* | .033 | .224* |
| Mother Worked for Pay | -.043 | .066 | | |
| Intact Family | .080* | .101* | .035 | .056 |
| Parental Socioeconomic Status | .023* | .030* | .044* | .039* |
| Number of Siblings | -.004 | -.011 | -.009 | -.005 |
| Farm Background | .112* | -.021 | .115* | -.043 |
| Foreign-born | .003 | .043 | .039 | .169 |
| Parental Help | -.074 | -.127 | -.125* | -.372* |
| Parents' Educational Goal | .059* | .146* | .142* | .133* |
| Foreign Language | .019 | -.096 | -.062 | .138 |
| Other Family Income (000's) | -.003 | .009 | .002 | .002 |
| IQ | .0008 | -.002 | .009* | .004 |
| Worked in High School | .033 | .042 | .121* | .207* |
| Friends in College | .038* | .041 | .075* | -.061 |
| Vocational Curriculum | -.030 | .155 | .140* | .128 |
| Commercial Curriculum | .093* | .043 | .142 | -.164 |
| College Preparatory Curriculum | .030 | .097 | -.020 | .064 |
| Hours Spent in Homework | .012 | .094* | .023 | .054* |
| Hours in Extracurricular Activities | .038* | -.056* | .011 | .006 |
| Sports | -.088* | -.053 | -.145* | -.272* |
| Work | .044 | | -.052 | |
| Math | -.089* | -.089 | -.046 | -.218* |
| Attitude Toward High School | .104* | .124* | .184* | .222* |
| Teacher Encouragement | .011 | .019 | -.060 | .035 |
| Number of Children | -.151* | -.117* | -.068* | -.032 |
| Marital Status | .053 | -.012 | .040 | .026 |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .424 | .813 | -.604 | -.411 |
| Adjusted R Square | .346 | .382 | .291 | .319 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-25: Whether Graduated Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex; Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.062 | .072 | .089 | .863* |
| Students Per Teacher | -.004 | -.918* | -.001 | -.003 |
| Expenditure Per Pupil | .00002 | -.0002 | -.0001 | -.0004* |
| Southern Residence | -.053 | -.123 | -.148* | -.207* |
| Metropolitan Residence | -.005 | -.052 | .027 | .053 |
| Unemployment Rate | .0009 | -.0009 | -.012 | .012 |
| Health Problem | -.153* | -.003 | -.033 | -.009 |
| Birth Cohort | .081* | .022 | .070* | .126* |
| Knowledge of World of Work | .190* | .316* | .049 | .208 |
| Mother Worked for Pay | -.061* | .058 | | |
| Intact Family | .035 | .197* | .031 | .036 |
| Parental Socioeconomic Status | .028* | .025 | .027* | .021 |
| Number of Siblings | -.015* | -.005 | -.001 | .007 |
| Farm Background | .036 | -.032 | .089* | .061 |
| Foreign-born | .003 | .141 | -.014 | -.208 |
| Parental Help | -.039 | -.382* | -.237* | -.249* |
| Parents' Educational Goal | .042 | .146* | .165* | .054 |
| Foreign Language | .002 | -.326 | .034 | -.051 |
| Other Family Income (000's) | .003 | -.007 | .004 | .01 |
| IQ | .002 | -.005* | .010* | .005* |
| Worked in High School | .057* | .089 | .058 | .290* |
| Friends in College | .032* | .074 | .069* | -.005 |
| Vocational Curriculum | .026 | .084 | .072 | .145 |
| Commercial Curriculum | .076* | .103 | .038 | .202 |
| College Preparatory Curriculum | -.015 | -.143 | -.058 | -.001 |
| Hours Spent in Homework | .037* | .059* | .051* | .026 |
| Hours in Extracurricular Activities | .019 | -.006 | .034* | .076* |
| Sports | -.113* | -.100 | -.116* | -.204* |
| Work | | -.049 | | -.085 |
| Math | -.052 | -.048 | .035 | -.271* |
| Attitude Toward High School | .077* | .154* | .142* | .251* |
| Teacher Encouragement | -.046 | .133* | .016 | .115 |
| Number of Children | -.082* | -.075* | -.014 | -.018 |
| Marital Status | .045 | .037 | -.014 | .024 |
| High School Graduate | | | | |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .045 | .936 | -.854 | -1.192 |
| Adjusted R Square | .265 | .320 | .286 | .388 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-26: Whether Received Training Three Years After High School, Respondents Not Enrolled in School in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .042 | -.266 | -.143 | .251 |
| Students Per Teacher | -.004 | .002 | -.002 | .015* |
| Expenditure Per Pupil | .00002 | .0002 | -.00008 | -.00001 |
| Southern Residence | .007 | -.052 | .048 | -.073 |
| Metropolitan Residence | .022 | .068 | .233* | .032 |
| Unemployment Rate | .006 | -.031* | -.002 | -.014 |
| Health Problem | .009 | .120 | -.010 | .039 |
| Birth Cohort | -.077* | .057 | -.012 | -.041 |
| Knowledge of World of Work | .044 | -.112 | .203* | .035 |
| Mother Worked for Pay | .078* | -.020 | | |
| Intact Family | -.044 | -.050 | -.017 | -.025 |
| Parental Socioeconomic Status | .008 | -.016 | -.002 | .021 |
| Number of Siblings | .011 | .010 | .023* | .004 |
| Farm Background | .013 | -.021 | .029 | -.084 |
| Foreign-born | .038 | .011 | .008 | .492* |
| Parental Help | .046 | .155* | .002 | -.115 |
| Parents' Educational Goal | -.032 | .002 | .104 | .137* |
| Foreign Language | -.015 | -.211 | .062 | .007 |
| Other Family Income (000's) | .002 | .01* | .002 | -.007 |
| IQ | .0007 | -.0003 | -.001 | -.001 |
| Worked in High School | .057 | -.233* | .079 | -.013 |
| Friends in College | .002 | .038 | .037 | .054 |
| Vocational Curriculum | .017 | -.083 | .114 | .055 |
| Commercial Curriculum | .014 | -.055 | .026 | .019 |
| College Preparatory Curriculum | .102* | .198* | .060 | .246* |
| Hours Spent in Homework | -.019 | .034 | .031 | .041 |
| Hours in Extracurricular Activities | .006 | .020 | -.018 | -.061* |
| Sports | -.067* | -.045 | .116 | -.001 |
| Work | .114* | .136 | -.045 | -.144* |
| Math | .017 | .014 | -.021 | .081 |
| Attitude Toward High School | .026 | .020 | .018 | -.105 |
| Teacher Encouragement | .025 | -.037 | -.015 | .054 |
| Number of Children | -.033 | .043 | -.103* | .037 |
| Marital Status | -.103* | -.001 | .179* | .007 |
| High School Graduate | .041 | .122* | .15* | .107 |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .174 | .118 | .002 | -.336 |
| Adjusted R Square | .054 | .099 | .100 | .136 |

1/ Metric Coefficients; * means coefficient is twice its standard error.

Table C-27: Whether Received Training Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.073 | .037 | .017 | .314 |
| Students Per Teacher | .0003 | -.008 | .0005 | .022* |
| Expenditure Per Pupil | -.00004 | .00004 | .0001 | .0003* |
| Southern Residence | -.045 | -.003 | .080 | -.051 |
| Metropolitan Residence | .042 | -.012 | .072 | .097 |
| Unemployment Rate | -.020* | .005 | .031* | .014 |
| Health Problem | -.088* | .074 | -.066 | -.037 |
| Birth Cohort | .011 | -.059 | -.045 | .058 |
| Knowledge of World of Work | .101 | -.010 | .004 | -.023 |
| Mother Worked for Pay | -.037 | -.001 | | |
| Intact Family | -.023 | -.046 | .046 | .058 |
| Parental Socioeconomic Status | .011 | .026* | -.018 | -.005 |
| Number of Siblings | .006 | .009 | -.002 | .007 |
| Farm Background | -.036 | .018 | -.115* | -.029 |
| Foreign-born | .029 | .128 | .004 | .285 |
| Parental Help | .054 | -.029 | -.080 | .018 |
| Parents' Educational Goal | -.021 | .023 | .088* | -.030 |
| Foreign Language | -.021 | -.056 | .017 | -.135 |
| Other Family Income (000's) | .0004 | -.004 | -.003 | .007 |
| IQ | .003* | .0004 | -.002 | .002 |
| Worked in High School | -.004 | -.041 | .092* | .053 |
| Friends in College | .026 | -.006 | .016 | -.013 |
| Vocational Curriculum | .201* | .082 | .081 | .122 |
| Commercial Curriculum | -.006 | .123* | -.084 | .051 |
| College Preparatory Curriculum | -.026 | -.049 | -.019 | .021 |
| Hours Spent in Homework | .007 | .023 | .006 | .026 |
| Hours in Extracurricular Activities | .031* | .011 | .015 | .013 |
| Sports | -.052* | -.059 | -.057 | -.018 |
| Work | -.002 | | -.030 | |
| Math | -.049 | .051 | .011 | -.046 |
| Attitude Toward High School | .035 | .071 | -.051 | .009 |
| Teacher Encouragement | -.050 | .039 | .077 | .043 |
| Number of Children | -.014 | .018 | -.031 | .033 |
| Marital Status | -.087* | -.087 | -.012 | -.117 |
| High School Graduate | -.053 | -.031 | .190* | .107* |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | -.069 | .022 | .217 | -1.407 |
| Adjusted R Square | .067 | -.002 | .081 | .115 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-28: Whether Received Training Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.172* | .123 | -.061 | .008 |
| Students Per Teacher | -.002 | .004 | -.001 | -.020* |
| Expenditure Per Pupil | .0001* | -.00007 | .00004 | -.0005* |
| Southern Residence | .054 | -.034 | .082* | -.099 |
| Metropolitan Residence | .001 | -.042 | .101* | .042 |
| Unemployment Rate | .002 | .005 | .006 | -.0009 |
| Health Problem | .033 | -.163* | .014 | .080 |
| Birth Cohort | .054* | .013 | -.039 | .079 |
| Knowledge of World of Work | .079 | .124 | .026 | -.083 |
| Mother Worked for Pay | .012 | .009 | | |
| Intact Family | .027 | .013 | -.041 | .048 |
| Parental Socioeconomic Status | .0005 | -.017 | .002 | -.019 |
| Number of Siblings | -.004 | .009 | -.011 | .018* |
| Farm Background | -.034 | .017 | .033 | -.042 |
| Foreign-born | -.039 | -.199 | .062 | .460* |
| Parental Help | -.009 | -.088 | -.041 | -.014 |
| Parents' Educational Goal | .058* | .110* | .055 | -.009 |
| Foreign Language | -.012 | .284 | -.180* | -.082 |
| Other Family Income (000's) | -.002 | -.007 | .005 | -.003 |
| IQ | .001 | .002 | .003 | .00005 |
| Worked in High School | -.016 | .055 | -.030 | .199* |
| Friends in College | -.003 | .019 | .004 | -.029 |
| Vocational Curriculum | .015 | -.080 | .037 | .049 |
| Commercial Curriculum | -.036 | .070 | -.075 | .143 |
| College Preparatory Curriculum | .066 | -.065 | .010 | -.081 |
| Hours Spent in Homework | -.014 | -.023 | .002 | -.023 |
| Hours in Extracurricular Activities | .014 | -.008 | -.035* | .092* |
| Sports | .014 | -.199* | .020 | -.034 |
| Work | | -.100 | | -.192* |
| Math | -.038 | .012 | .033 | -.051 |
| Attitude Toward High School | .024 | -.027 | -.028 | .158* |
| Teacher Encouragement | -.014 | .090 | .026 | .086 |
| Number of Children | -.010 | .027* | .003 | -.007 |
| Marital Status | -.074 | -.031 | .043 | .017 |
| High School Graduate | .032 | -.027 | .086* | -.040 |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | -.062 | -.137 | .054 | .835 |
| Adjusted R Square | .065 | .082 | .036 | .188 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-29: Whether Employed Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.014 | .105 | .061 | -.172 |
| Students Per Teacher | .0005 | .008 | .001 | -.002 |
| Expenditure Per Pupil | .00004 | -.00007 | .00008 | -.0003* |
| Southern Residence | .050 | .090 | .0006 | -.090 |
| Metropolitan Residence | -.043 | -.028 | .021 | -.112 |
| Unemployment Rate | -.18* | .004 | -.008 | -.021 |
| Health Problem | .035 | -.151 | .001 | -.155 |
| Birth Cohort | .030 | -.083 | -.064* | -.023 |
| Knowledge of World of Work | .073 | .194 | -.043 | -.066 |
| Mother Worked for Pay | -.010 | -.005 | | |
| Intact Family | .017 | .002 | .012 | -.006 |
| Parental Socioeconomic Status | -.005 | .0007 | .007 | -.013 |
| Number of Siblings | -.003 | -.012 | .0006 | .0002 |
| Farm Background | .098* | .079 | .046 | .054 |
| Foreign-born | .002 | -.120 | .012 | -.012 |
| Parental Help | .028 | .176 | .038 | .005 |
| Parents' Educational Goal | -.028 | .062 | -.062* | -.129* |
| Foreign Language | .032 | -.411 | .036 | .118 |
| Other Family Income (000's) | -.002 | -.004 | -.002 | -.005 |
| IQ | -.0004 | .001 | .001 | -.003 |
| Worked in High School | -.0004 | .122 | .012 | -.009 |
| Friends in College | .011 | -.047 | .007 | .052 |
| Vocational Curriculum | -.136 | -.032 | -.050 | -.007 |
| Commercial Curriculum | .007 | -.023 | .038 | -.021 |
| College Preparatory Curriculum | .095 | .084 | .040 | .196 |
| Hours Spent in Homework | -.024 | -.015 | .002 | .0007 |
| Hours in Extracurricular Activities | .021 | -.012 | .021* | -.023 |
| Sports | -.030 | .002 | -.065* | -.039 |
| Work | .056 | -.036 | .009 | .034 |
| Math | -.052 | -.046 | -.008 | -.007 |
| Attitude Toward High School | .070* | .026 | .024 | -.074 |
| Teacher Encouragement | -.015 | -.098 | .017 | .020 |
| Number of Children | -.160* | -.103* | -.029 | -.009 |
| Marital Status | -.197* | -.197* | .051 | .118 |
| High School Graduate | .129 | .015 | .014 | .121 |
| Training | .061 | .143 | -.035 | -.075 |
| Work Experience | .063* | .088* | -.012 | -.004 |
| Occupation | | | | |
| Constant | .586 | .334 | .762 | 2.01 |
| Adjusted R Square | .299 | .214 | .070 | .071 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-30: Whether Employed Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .068 | -.387 | .049 | -.188 |
| Students Per Teacher | -.0003 | .003 | -.0001 | -.011* |
| Expenditure Per Pupil | -.00003 | -.0003* | .00007* | -.0001 |
| Southern Residence | .034 | .049 | -.00004 | -.004 |
| Metropolitan Residence | .009 | .075 | -.008 | .030 |
| Unemployment Rate | -.007 | -.013 | .002 | .012 |
| Health Problem | -.007 | -.146 | -.059* | -.086 |
| Birth Cohort | .014 | -.081 | -.042* | -.005 |
| Knowledge of World of Work | -.022 | .121 | -.027 | -.042 |
| Mother Worked for Pay | .032 | .078 | | |
| Intact Family | .023 | .041 | .114 | .013 |
| Parental Socioeconomic Status | -.003 | .017 | -.002 | .006 |
| Number of Siblings | .009 | -.009 | -.008* | .002 |
| Farm Background | .104* | .051 | .028 | .086 |
| Foreign-born | -.052 | .063 | -.001 | .070 |
| Parental Help | -.037 | -.095 | .002 | -.029 |
| Parents' Educational Goal | .026 | .007 | .027 | -.081 |
| Foreign Language | .023 | -.255 | .006 | .120 |
| Other Family Income (000's) | -.0002 | -.005 | -.009* | -.008 |
| IQ | .002 | .0003 | -.0002 | -.0007 |
| Worked in High School | .098* | .019 | .026 | .115* |
| Friends in College | .005 | -.039 | -.028* | .009 |
| Vocational Curriculum | -.007 | -.080 | .014 | -.018 |
| Commercial Curriculum | .031 | .055 | -.011 | .166 |
| College Preparatory Curriculum | .064 | .056 | .048 | .125 |
| Hours Spent in Homework | -.025* | .021 | .003 | -.004 |
| Hours in Extracurricular Activities | .020 | -.008 | .002 | .026 |
| Sports | .014 | .125* | -.051* | .077 |
| Work | -.089* | | .024 | |
| Math | -.014 | -.004 | .038* | -.056 |
| Attitude Toward High School | -.015 | .017 | -.013 | .060 |
| Teacher Encouragement | -.014 | .073 | .022 | -.0002 |
| Number of Children | -.140* | -.042* | -.018 | -.008 |
| Marital Status | -.188* | .011 | .052* | .042 |
| High School Graduate | -.034 | .049 | -.012 | .054 |
| Training | .131* | .024 | -.025 | -.004 |
| Work Experience | .068* | .098* | .002 | .013 |
| Occupation | | | | |
| Constant | .314 | .695 | 1.043 | 1.140 |
| Adjusted R Square | .310 | .267 | .122 | .053 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-31: Whether Employed Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .102 | .315 | .051 | -.338* |
| Students Per Teacher | .003 | .007 | -.001 | -.011* |
| Expenditure Per Pupil | -.00007 | .0001 | -.00007* | -.0003* |
| Southern Residence | .052 | .125* | .003 | .2 |
| Metropolitan Residence | -.018 | .057 | .011 | .013 |
| Unemployment Rate | -.0002 | .009 | -.002 | .019* |
| Health Problem | -.122* | -.141 | -.049 | -.320* |
| Birth Cohort | .043 | .015 | -.018 | -.170* |
| Knowledge of World of Work | .045 | .189 | .049 | -.091 |
| Mother Worked for Pay | .024 | .106 | | |
| Intact Family | -.034 | .080 | -.002 | -.068* |
| Parental Socioeconomic Status | -.014 | .069* | .009* | .017 |
| Number of Siblings | .012 | .002 | -.002 | -.007 |
| Farm Background | .044 | .060 | .006 | .020 |
| Foreign-born | .053 | -.101 | -.022 | -.075 |
| Parental Help | .038 | -.176 | -.025 | -.129* |
| Parents' Educational Goal | -.004 | -.006 | .011 | -.108* |
| Foreign Language | -.018 | -.028 | .045 | .029 |
| Other Family Income (000's) | -.006* | -.03* | -.003* | -.004 |
| IQ | -.0002 | -.0003 | .002* | .009* |
| Worked in High School | .047 | .101 | .050* | -.036 |
| Friends in College | .017 | .030 | -.020 | .030 |
| Vocational Curriculum | -.028 | -.226 | .013 | .040 |
| Commercial Curriculum | -.038 | .123 | .024 | -.363* |
| College Preparatory Curriculum | .077 | -.101 | .032 | .012 |
| Hours Spent in Homework | .014 | .047 | -.0005 | -.016 |
| Hours in Extracurricular Activities | -.014 | -.099* | -.016* | -.040* |
| Sports | .035 | .119 | .012 | .249* |
| Work | | -.083 | | .077 |
| Math | .030 | .016 | -.018 | -.017 |
| Attitude Toward High School | -.007 | .046 | .018 | -.097* |
| Teacher Encouragement | -.007 | .107 | .022 | -.035 |
| Number of Children | -.069* | -.05 | .006 | .005 |
| Marital Status | -.068 | .154* | -.004 | .099* |
| High School Graduate | .020 | -.064 | .034 | .057 |
| Training | .194* | .062 | -.012 | .095* |
| Work Experience | .059* | .060* | .011* | -.024* |
| Occupation | | | | |
| Constant | .228 | -1.076 | 1.055 | 1.255 |
| Adjusted R Square | .288 | .378 | .064 | .526 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-32: Unemployment Experience Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | 1.23 | 3.59 | -.720 | 7.30 |
| Students Per Teacher | -.014 | .068 | -.075 | -.442* |
| Expenditure Per Pupil | .005 | -.004 | -.001 | .006 |
| Southern Residence | -.595 | -.670 | -.508 | .294 |
| Metropolitan Residence | .113 | .521 | -.550 | .292 |
| Unemployment Rate | .250* | .439 | .276 | .724 |
| Health Problem | -1.19 | -1.63 | .400 | 1.55 |
| Birth Cohort | -.330 | 1.07 | 1.16* | 1.44 |
| Knowledge of World of Work | -.865 | .153 | -4.17* | 6.88* |
| Mother Worked for Pay | .652 | -.791 | | |
| Intact Family | -.961 | .985 | .043 | -1.15 |
| Parental Socioeconomic Status | -.201* | -.381 | .251 | -.218 |
| Number of Siblings | .088 | .0005 | .012 | -.317 |
| Farm Background | -.211 | -.397 | -1.[illegible] | 1.05 |
| Foreign-born | .153 | 1.78 | .384 | -5.38 |
| Parental Help | .018 | -2.95 | -3.27* | -.348 |
| Parents' Educational Goal | .096 | .660 | .572 | 1.20 |
| Foreign Language | -.546 | -2.01 | -1.36 | 1.42 |
| Other Family Income (000's) | .02 | .04 | .06 | .04 |
| IQ | .003 | -.046 | -.028 | -.045 |
| Worked in High School | -.435 | .305 | -.236 | 1.29 |
| Friends in College | .462 | .720 | -.420 | .715 |
| Vocational Curriculum | -.183 | 2.49 | .484 | .077 |
| Commercial Curriculum | .144 | -.758 | -1.07 | -5.14 |
| College Preparatory Curriculum | .408 | -1.34 | 1.58 | -1.60 |
| Hours Spent in Homework | -.037 | -.004 | -.045 | -.565 |
| Hours in Extracurricular Activities | -.154 | -1.06 | .153 | -.312 |
| Sports | -.732 | .107 | -1.11 | 2.30 |
| Work | .388 | .770 | -.991 | -1.68 |
| Math | 1.64* | -1.19 | .449 | -.666 |
| Attitude Toward High School | .026 | -2.41* | -1.74* | .472 |
| Teacher Encouragement | -.652 | 2.68* | -1.10 | .396 |
| Number of Children | -.012 | -.489 | .540 | .360 |
| Marital Status | -.709 | -1.96 | -1.04 | -2.52 |
| High School Graduate | .367 | -1.33 | .087 | -2.56 |
| Training | 1.29* | 2.20 | .969 | 3.46 |
| Work Experience | -.009 | .054 | -.048 | -1.01 |
| Occupation | | | | |
| Constant | 2.13 | 7.36 | 8.11 | 1.05 |
| Adjusted R Square | .034 | .034 | .128 | .045 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-33: Unemployment Experience Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | 1.60* | -8.93* | .090 | 6.73 |
| Students Per Teacher | -.020 | .027 | -.055 | .092 |
| Expenditure Per Pupil | -.002* | -.001 | -.002* | -.0001 |
| Southern Residence | -.807* | 1.62 | -.245 | -2.761* |
| Metropolitan Residence | .087 | -1.19 | .426 | -2.00 |
| Unemployment Rate | .047 | .466* | .362* | .336 |
| Health Problem | .553 | .095 | -.451 | 3.630* |
| Birth Cohort | -.078 | -.824 | 1.188* | .859 |
| Knowledge of World of Work | -.243 | .880 | .477 | 1.758 |
| Mother Worked for Pay | -.134 | -1.87* | | |
| Intact Family | -.677 | -1.89* | -.097 | -.315 |
| Parental Socioeconomic Status | -.280* | -.173 | .040 | .216 |
| Number of Siblings | .113 | .125 | .104 | -.013 |
| Farm Background | -.926 | -.020 | -1.015 | -.628 |
| Foreign-born | .092 | -3.99 | .763 | -4.104 |
| Parental Help | 1.28* | .391 | -1.168 | 1.072 |
| Parents' Educational Goal | .104 | .811 | .668 | .692 |
| Foreign Language | .052 | 3.07 | -1.905 | .906 |
| Other Family Income (000's) | .008 | .10 | .04 | .06 |
| IQ | -.038* | .005 | .002 | .048 |
| Worked in High School | -.296 | -1.54 | 1.012 | -2.282* |
| Friends in College | -.0002 | .484 | .434 | -.640 |
| Vocational Curriculum | .912 | 1.16 | .612 | .801 |
| Commercial Curriculum | -.096 | .533 | -.801 | -4.731 |
| College Preparatory Curriculum | -.173 | .214 | -.420 | -1.248 |
| Hours Spent in Homework | .191 | -.408 | -.165 | .193 |
| Hours in Extracurricular Activities | .281 | 1.41* | -.583* | .278 |
| Sports | -.308 | -1.32 | -.994 | -3.354* |
| Work | .017 | | -1.718* | |
| Math | -.089 | -.388 | -1.004 | .118 |
| Attitude Toward High School | -.655 | -.061 | -.561 | -1.238 |
| Teacher Encouragement | .116 | -.476 | .152 | 2.043 |
| Number of Children | -.148 | -.248 | .247 | -.034 |
| Marital Status | -1.03* | -1.88* | -1.607* | -.108 |
| High School Graduate | .150 | -.198 | -1.006 | -1.906 |
| Training | .806 | .015 | -.046 | 2.015 |
| Work Experience | .044 | -.142 | .388 | -.506 |
| Occupation | | | | |
| Constant | 8.79 | 12.43 | 1.939 | -6.053 |
| Adjusted R Square | .040 | .023 | .085 | .076 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-34: Unemployment Experience Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression. 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .106 | -5.506 | -1.567 | 2.745 |
| Students Per Teacher | .027 | -.001 | -.068 | .027 |
| Expenditure Per Pupil | .001 | -.004 | .001 | -.002 |
| Southern Residence | -.330 | -1.662 | -.724 | -2.619 |
| Metropolitan Residence | -.674 | -.553 | -.104 | -1.966 |
| Unemployment Rate | .111 | .131 | .206* | .338 |
| Health Problem | .313 | 2.179 | 1.459 | 1.520 |
| Birth Cohort | -.441 | .052 | .831* | 1.226 |
| Knowledge of World of Work | -.823 | 1.674 | 1.534 | 4.244 |
| Mother Worked for Pay | .443 | .250 | | |
| Intact Family | .044 | -.071 | -.691* | -.346 |
| Parental Socioeconomic Status | -.166 | -.082 | -.098 | .145 |
| Number of Siblings | -.048 | .188 | .182 | .039 |
| Farm Background | -.237 | .691 | -.576 | -.103 |
| Foreign-born | -.548 | -4.685 | -.733 | .089 |
| Parental Help | .004 | -1.625 | .119 | -2.333 |
| Parents' Educational Goal | -.099 | -.790 | -.313 | -.759 |
| Foreign Language | .310 | -2.142 | -.178 | -2.062 |
| Other Family Income (000's) | .12* | .09 | .10* | .20 |
| IQ | -.0008 | .028 | -.005 | .069 |
| Worked in High School | -.526 | 1.578 | -.473 | 1.635 |
| Friends in College | -.079 | -1.157 | .235 | 1.006 |
| Vocational Curriculum | -1.428 | -2.217 | -1.039 | .166 |
| Commercial Curriculum | .102 | -1.703 | 1.440 | .682 |
| College Preparatory Curriculum | -.226 | -1.416 | -.794 | -5.104* |
| Hours Spent in Homework | -.006 | -.639 | .043 | .987 |
| Hours in Extracurricular Activities | .342 | -.398 | .017 | -.158 |
| Sports | 1.25* | 2.533* | -.366 | .777 |
| Work | | -.188 | | -.244 |
| Math | .744 | -1.615 | .812 | 1.039 |
| Attitude Toward High School | .419 | -.190 | .099 | 2.339 |
| Teacher Encouragement | .208 | 1.368 | -.633 | -.730 |
| Number of Children | -.087 | -.745* | .120 | -.305 |
| Marital Status | -.210* | -1.701 | -.731 | -4.025* |
| High School Graduate | -1.39* | .457 | -1.058 | -2 929 |
| Training | 1.098 | 2.464 | -.370 | 2 377 |
| Work Experience | .018 | -.325 | .061 | .251 |
| Occupation | | | | |
| Constant | 3.17 | 14.35 | 1.549 | -12 190 |
| Adjusted R Square | .052 | .014 | .064 | .050 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-35: Annual Hours Worked Three Years After High School, Respondents Not Enrolled in School in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -130 | 299 | -25 | -314 |
| Students Per Teacher | 5 | -11 | -1 | 45 * |
| Expenditure Per Pupil | | -.275 | .124 | -.052 |
| Southern Residence | 101 | 117 | -86 | 30 |
| Metropolitan Residence | -32 | 34 | 23 | 48 |
| Unemployment Rate | -55 * | 12 | -33 | -39 |
| Health Problem | -40 | -301 | -116 | -232 |
| Birth Cohort | -62 | -341 * | -174 * | -242 * |
| Knowledge of World of Work | 199 | 274 | 104 | -191 |
| Mother Worked for Pay | -96 | -52 | | |
| Intact Family | 68 | 5 | -.889 | 98 |
| Parental Socioeconomic Status | 19 | 28 | -12 | 29 |
| Number of Siblings | 6 | -11 | -10 | -1 |
| Farm Background | 81 | 132 | 238 * | -322 * |
| Foreign-born | -48 | -746 | -18 | 94 |
| Parental Help | -73 | 125 | -10 | -672 * |
| Parents' Educational Goal | -44 | 276 * | -103 | 87 |
| Foreign Language | 13 | -848 * | -104 | 406 |
| Other Family Income (000's) | -8 | -34 * | -31 * | -14 |
| IQ | 1 | 2 | 2 | -10 * |
| Worked in High School | -70 | -93 | -79 | 240 |
| Friends in College | -6 | -71 | 134 * | -70 |
| Vocational Curriculum | -452 * | -193 | -151 | 90 |
| Commercial Curriculum | -15 | -121 | 165 | -336 |
| College Preparatory Curriculum | 8 | 168 | -178 | 573 * |
| Hours Spent in Homework | -19 | 15 | 44 | 50 |
| Hours in Extracurricular Activities | 32 | 116 * | -11 | -17 |
| Sports | -36 | -89 | 82 | -146 |
| Work | 43 | 217 | 77 | 76 |
| Math | -97 | -29 | 83 | -49 |
| Attitude Toward High School | 35 | 134 | 165 * | 130 |
| Teacher Encouragement | 41 | -221 * | 66 | 152 |
| Number of Children | -436 * | -281 * | -78 | -86 |
| Marital Status | -395 * | -123 | 103 | 462 * |
| High School Graduate | 11 | -83 | -82 | 24 |
| Training | 136 * | 10 | -190 * | -527 * |
| Work Experience | 139 * | 162 * | -12 | 27 |
| Occupation | | | | |
| Constant | 1279 | 1365 | 2201 | 2434 |
| Adjusted R Square | .429 | .348 | .164 | .178 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-36: Annual Hours Worked Five Years After High School, Respondents Not Enrolled in School 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | 76 | 726* | -17 | -226 |
| Students Per Teacher | 2 | 3 | -5 | 1 |
| Expenditure Per Pupil | .074 | -.300* | .098 | .094 |
| Southern Residence | 45 | 50 | -28 | 96 |
| Metropolitan Residence | 66 | -41 | -104 | -20 |
| Unemployment Rate | -26* | -40* | 11 | 1 |
| Health Problem | -102 | -311* | -68 | -222 |
| Birth Cohort | 17 | -161* | -130 | -222* |
| Knowledge of World of Work | -46 | 279 | 23 | -123 |
| Mother Worked for Pay | 26 | 42 | | |
| Intact Family | -44 | 84 | 39 | 157 |
| Parental Socioeconomic Status | 6 | 52* | | 49 |
| Number of Siblings | .315 | -.785 | -28* | -1 |
| Farm Background | 247* | -63 | 29 | 175 |
| Foreign-born | -70 | 682* | -16 | 478 |
| Parental Help | -97 | -15 | 41 | -147 |
| Parents' Educational Goal | 111 | -5 | 24 | -38 |
| Foreign Language | 18 | -1005* | 14 | 43 |
| Other Family Income (000's) | -15* | -23* | -43* | -33* |
| IQ | .722 | 6 | .189 | -6 |
| Worked in High School | 129* | -4 | -121 | 259* |
| Friends in College | -52 | -42 | -102* | 15 |
| Vocational Curriculum | -74 | 140 | -15 | 193 |
| Commercial Curriculum | -25 | 24 | -27 | 218 |
| College Preparatory Curriculum | 166* | -102 | -7 | 180 |
| Hours Spent in Homework | -26 | 63 | 66* | 9 |
| Hours in Extracurricular Activities | 33 | 19 | -10 | 26 |
| Sports | -20 | 48 | 78 | -69 |
| Work | -16 | | 190* | |
| Math | -27 | -47 | 87 | -98 |
| Attitude Toward High School | 31 | -23 | -7 | 35 |
| Teacher Encouragement | -26 | -30 | -4 | -5 |
| Number of Children | -343* | -61 | 22 | -64 |
| Marital Status | -282* | -220* | 151* | 214 |
| High School Graduate | -48 | 285* | 21 | 136 |
| Training | 195* | 131 | -70 | -330* |
| Work Experience | 119* | 144* | 1 | 84* |
| Occupation | | | | |
| Constant | 1079 | -317 | 2152 | 1876 |
| Adjusted R Square | .392 | .350 | .147 | .141 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-37: Annual Hours Worked Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | 119 | 105 | 314* | -695 |
| Students Per Teacher | .774 | 11 | -6 | 16 |
| Expenditure Per Pupil | -.224* | .096 | -.254* | -.170 |
| Southern Residence | 120* | 249* | -114 | 232* |
| Metropolitan Residence | 57 | 300* | -59 | -138 |
| Unemployment Rate | 4 | 41* | -7 | 8 |
| Health Problem | -184* | -42 | -175 | -532* |
| Birth Cohort | 24 | 39 | -94 | -70 |
| Knowledge of World of Work | -20 | 163 | 59 | -351* |
| Mother Worked for Pay | -10 | 297* | | |
| Intact Family | -59 | 78 | 18 | -2 |
| Parental Socioeconomic Status | -13 | 84* | -8 | 52 |
| Number of Siblings | 16 | -2 | -3 | -28 |
| Farm Background | 110 | -2 | -15 | 31 |
| Foreign-born | 30 | -106 | -100 | 193 |
| Parental Help | 135 | -203 | -4 | -204 |
| Parents' Educational Goal | -7 | -124 | 115 | 102 |
| Foreign Language | -43 | -271 | 33 | 552 |
| Other Family Income (000's) | -42* | -17 | -58* | -43* |
| IQ | -1 | -2 | 2 | -3 |
| Worked in High School | -9 | 45 | 128* | -112 |
| Friends in College | -9 | 79 | -19 | 15 |
| Vocational Curriculum | -8 | 29 | -37 | 256* |
| Commercial Curriculum | 15 | 387* | -48 | -301 |
| College Preparatory Curriculum | 216* | 91 | 16 | 359* |
| Hours Spent in Homework | -20 | 119* | -2 | -95* |
| Hours in Extracurricular Activities | 23 | -254* | 30 | 32 |
| Sports | -125* | 123 | 110 | 95 |
| Work | | -48 | | 70 |
| Math | 78 | -87 | -42 | -9 |
| Attitude Toward High School | 16 | 182 | 53 | -188 |
| Teacher Encouragement | 60 | 86 | -25 | 36 |
| Number of Children | -180* | -91* | -42 | 27 |
| Marital Status | -53 | 120 | 4 | 236* |
| High School Graduate | -18 | -78 | -64 | 280* |
| Training | 212* | 117 | 65 | -66 |
| Work Experience | 112* | 134* | -30 | 21 |
| Occupation | | | | |
| Constant | 1068 | -1377 | 2610 | 2242 |
| Adjusted R Square | .446 | .414 | .154 | .245 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-38: Work Experience Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.154 | 1.96* | .256 | 1.39 |
| Students Per Teacher | .023* | .022 | .025* | -.042 |
| Expenditure Per Pupil | .0008* | .001* | .00006 | .0001 |
| Southern Residence | .335* | -.222 | -.101 | -.293 |
| Metropolitan Residence | -.039 | -.500 | -.041 | -.007 |
| Unemployment Rate | -.010 | .017 | -.002 | .023 |
| Health Problem | -.138 | -.440 | -.383* | .224 |
| Birth Cohort | .420* | .116 | .377* | .700* |
| Knowledge of World of Work | .099 | .693 | -.515* | .579 |
| Mother Worked for Pay | .263* | .515* | | |
| Intact Family | .030 | .059 | .043 | -.012 |
| Parental Socioeconomic Status | .008 | -.162* | -.072* | -.078 |
| Number of Siblings | .052* | -.014 | .032 | .029 |
| Farm Background | -.263 | -.527* | .100 | -.156 |
| Foreign-born | .120 | -1.11 | -.184 | -.562 |
| Parental Help | .359 | -.107 | .101 | .590* |
| Parents' Educational Goal | -.170 | -.338 | -.053 | -.216 |
| Foreign Language | -.050 | 2.67* | .316 | .321 |
| Other Family Income (000's) | -.02 | -.002 | .02* | -.004 |
| IQ | .030* | .031* | .011* | .019* |
| Worked in High School | -.221 | -.132 | .033 | -.011 |
| Friends in College | -.104 | .140 | -.085 | -.158 |
| Vocational Curriculum | .014 | .116 | .023 | -.165 |
| Commercial Curriculum | .410* | .046 | -.030 | .451 |
| College Preparatory Curriculum | -.287 | -.481 | -.163 | -.039 |
| Hours Spent in Homework | -.042 | .016 | .018 | -.029 |
| Hours in Extracurricular Activities | -.002 | -.029 | .014 | -.168* |
| Sports | .106 | -.062 | -.187 | .187 |
| Work | .358* | .794* | -.058 | -.379 |
| Math | .228 | -.186 | .040 | .086 |
| Attitude Toward High School | -.076 | -.146 | -.037 | -.251 |
| Teacher Encouragement | .002 | .213 | -.075 | .003 |
| Number of Children | -.454* | -.033 | .197* | .027 |
| Marital Status | -.403* | -.267 | -.035 | .134 |
| High School Graduate | .061 | .260 | -.975* | -.851* |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | -2.32 | -3.31 | 2.99 | 1.12 |
| Adjusted R Square | .181 | .163 | .296 | .317 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-39: Work Experience Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.187 | 2.68* | -.040 | -.094 |
| Students Per Teacher | .023* | -.029 | .017* | -.053* |
| Expenditure Per Pupil | .0008* | .001* | .0002 | -.0004 |
| Southern Residence | .336* | .005 | -.089 | .371 |
| Metropolitan Residence | .123 | -.377 | -.108 | .343 |
| Unemployment Rate | -.004 | -.007 | -.014 | -.052 |
| Health Problem | -.921* | .352 | -.402* | -.315 |
| Birth Cohort | .296* | .071 | .402* | .728* |
| Knowledge of World of Work | .378 | 1.59* | -.285 | .048 |
| Mother Worked for Pay | .242 | .571* | | |
| Intact Family | .004 | .063 | .045 | -.115 |
| Parental Socioeconomic Status | -.035 | -.177* | -.077* | -.081 |
| Number of Siblings | .031 | -.036 | .015 | -.003 |
| Farm Background | -.012 | -.223 | .119 | .308 |
| Foreign-born | .062 | -.992 | -.028 | -.779 |
| Parental Help | .033 | -.218 | .100 | .624* |
| Parents' Educational Goal | .007 | -.205 | -.086 | -.256 |
| Foreign Language | -.057 | 1.78* | .104 | .090 |
| Other Family Income (000's) | .0006 | -.05* | -.07 | .01 |
| IQ | .033* | -.036* | .014* | .015* |
| Worked in High School | -.063 | -.032 | -.083 | -.125 |
| Friends in College | .018 | -.041 | -.088 | -.274* |
| Vocational Curriculum | .063 | -.951 | .174 | .113 |
| Commercial Curriculum | .496* | .163 | .240 | .229 |
| College Preparatory Curriculum | .016 | -.672 | -.210 | .245 |
| Hours Spent in Homework | -.019 | -.043 | .016 | -.055 |
| Hours in Extracurricular Activities | -.080 | .103 | .048 | -.100 |
| Sports | .200 | -.880* | .068 | .007 |
| Work | .379* | | .040 | |
| Math | .555* | .220 | .167 | .131 |
| Attitude Toward High School | .066 | .043 | -.167 | -.444* |
| Teacher Encouragement | -.143 | -.002 | .028 | -.128 |
| Number of Children | -.785* | .006 | .062 | .009 |
| Marital Status | -.696* | -.394 | -.066 | .109 |
| High School Graduate | -.035 | .917* | -1.084* | -.970* |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | -.699 | -2.58 | 4.83 | 6.299 |
| Adjusted R Square | .263 | .213 | .282 | .307 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-40: Work Experience Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .078 | 2.450 | -.080 | -.556 |
| Students Per Teacher | .041* | -.130* | .011 | -.062* |
| Expenditure Per Pupil | -.0002 | -.003* | .0001 | -.0003 |
| Southern Residence | .578* | .026 | .048 | .406 |
| Metropolitan Residence | .227 | -.650 | -.129 | .139 |
| Unemployment Rate | -.014 | -.018 | -.007 | -.045 |
| Health Problem | -.021 | -.741 | -.126 | -.234 |
| Birth Cohort | -.066 | -.559 | .163 | .226 |
| Knowledge of World of Work | .741 | 2.33* | .097 | .045 |
| Mother Worked for Pay | .454* | 1.27* | | |
| Intact Family | .198 | -.153 | .095 | -.157 |
| Parental Socioeconomic Status | -.048 | -.110 | -.061* | -.067 |
| Number of Siblings | .045 | .009 | .028 | -.017 |
| Farm Background | .019 | -.620 | .122 | .164 |
| Foreign-born | -.089 | -1.891 | .059 | -1.323 |
| Parental Help | -.057 | -1.45* | -.032 | .433 |
| Parents' Educational Goal | .002 | -.425 | .026 | -.091 |
| Foreign Language | -.329 | .530 | -.130 | .438 |
| Other Family Income (000's) | -.01 | .07 | -.02 | .03 |
| IQ | .040* | .057* | .013* | .011 |
| Worked in High School | .043 | -.004 | -.136 | -.394 |
| Friends in College | .291* | -.383 | -.095 | -.068 |
| Vocational Curriculum | .568 | -1.241 | .206 | -.052 |
| Commercial Curriculum | .506* | -.285 | .418 | .144 |
| College Preparatory Curriculum | .235 | -.604 | -.178 | -.067 |
| Hours Spent in Homework | -.052 | .002 | -.036 | -.0005 |
| Hours in Extracurricular Activities | -.184 | .277 | .020 | -.166 |
| Sports | .638* | -.308 | .234 | .499* |
| Work | | 1.64* | | .098 |
| Math | .591 | .347 | .091 | .282 |
| Attitude Toward High School | .334 | -.397 | -.252* | -.492* |
| Teacher Encouragement | -.345 | .669 | .085 | -.155 |
| Number of Children | -1.078* | -.467* | -.032 | .078 |
| Marital Status | -.323 | -.763 | .202 | -.223 |
| High School Graduate | .371 | .127 | -1.169* | -.692* |
| Training | | | | |
| Work Experience | | | | |
| Occupation | | | | |
| Constant | .878 | 5.034 | 8.966 | 11.597 |
| Adjusted R Square | .219 | .214 | .205 | .186 |

1/ Metric Coefficients; * means coefficient is twice its standard error.

Table C-41: Proportion Female in Respondent's Occupation Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.033 | .316* | -.091 | -.116 |
| Students Per Teacher | -.0008 | .002 | .0003 | .010* |
| Expenditure Per Pupil | .00003 | -.0002* | -.00005 | -.00009 |
| Southern Residence | .047* | -.046 | .027 | -.055 |
| Metropolitan Residence | .059* | -.018 | .051 | .007 |
| Unemployment Rate | -.0005 | -.010 | -.008 | -.013 |
| Health Problem | -.060 | -.016 | .046 | .042 |
| Birth Cohort | .034 | -.044 | .024 | -.037 |
| Knowledge of World of Work | -.092 | -.012 | .042 | .056 |
| Mother Worked for Pay | -.006 | .018 | | |
| Intact Family | .018 | -.033 | -.003 | .023 |
| Parental Socioeconomic Status | -.00003 | .013 | -.004 | .016 |
| Mother's Occupation | .032 | -.016 | -.138* | -.256* |
| Father's Occupation | -.012 | -.122 | .242* | .032 |
| Number of Siblings | -.009 | .002 | -.007 | -.007 |
| Farm Background | -.005 | -.010 | .001 | -.045 |
| Foreign-born | .025 | -.013 | -.041 | .171 |
| Parental Help | .034 | .003 | -.045 | -.124* |
| Parents' Educational Goal | .028 | .017 | .044 | .063 |
| Foreign Language | -.039 | -.102 | .084 | .065 |
| Other Family Income (000's) | -.004* | .006 | .002 | -.003 |
| IQ | .002 | .0007 | .0004 | -.003* |
| Worked in High School | .008 | .072 | .004 | -.009 |
| Friends in College | .009 | .010 | .006 | -.060* |
| Vocational Curriculum | -.030 | .174 | -.023 | .032 |
| Commercial Curriculum | .035 | .013 | .0003 | .079 |
| College Preparatory Curriculum | -.001 | .014 | -.052 | .169* |
| Hours Spent in Homework | -.006 | .035* | .003 | -.005 |
| Hours in Extracurricular Activities | -.008 | .0003 | -.001 | .022 |
| Sports | -.005 | -.021 | -.002 | -.081* |
| Work | -.041 | -.163* | -.034 | .006 |
| Math | -.030 | -.046 | .038 | .061 |
| Attitude Toward High School | .061* | -.015 | .029 | -.072* |
| Teacher Encouragement | .034 | -.020 | -.040 | .057 |
| Number of Children | -.0001 | .003 | -.033 | .017 |
| Marital Status | -.008 | -.032 | .055 | -.080 |
| High School Graduate | .043 | -.112* | .023 | .058 |
| Training | .011 | -.072 | -.056* | -.039 |
| Work Experience | -.002 | -.007 | -.019 | -.011 |
| Occupation | | | | |
| Constant | .512 | .526 | .363 | .834 |
| Adjusted R Square | .056 | .010 | .049 | .173 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-42: Proportion Female in Respondent's Occupation Five Years After High School, Respondents Not Enrolled in 1966/68 by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.015 | -.187 | .044 | -.025 |
| Students Per Teacher | .001 | .006 | .002 | -.002 |
| Expenditure Per Pupil | -.00002 | .0002* | .00001 | -.00002 |
| Southern Residence | .003 | .080* | .035 | -.060 |
| Metropolitan Residence | .043* | .031 | -.008 | .019 |
| Unemployment Rate | -.008* | -.003 | -.005 | .008 |
| Health Problem | .073* | .087 | .019 | .023 |
| Birth Cohort | -.005 | .018 | .012 | -.034 |
| Knowledge of World of Work | .020 | -.059 | .025 | -.091 |
| Mother Worked for Pay | -.001 | -.051 | | |
| Intact Family | .013 | .009 | .004 | -.041 |
| Parental Socioeconomic Status | .002 | -.003 | -.007 | -.005 |
| Mother's Occupation | .059 | .057 | .057* | .011 |
| Father's Occupation | -.030 | .034 | .125* | .154 |
| Number of Siblings | -.004 | -.002 | -.004 | .0002 |
| Farm Background | -.041 | -.035 | -.024 | -.052 |
| Foreign-born | -.010 | -.341* | .014 | -.187 |
| Parental Help | .020 | -.006 | -.080* | -.123* |
| Parents' Educational Goal | .008 | .006 | .023 | .051 |
| Foreign Language | -.046 | -.087 | -.006 | .035 |
| Other Family Income (000's) | .004* | .005 | .003* | -.002 |
| IQ | .002* | .002 | -.00003 | .002 |
| Worked in High School | -.002 | -.026 | -.033 | .077* |
| Friends in College | .014 | .011 | -.007 | .029 |
| Vocational Curriculum | -.097 | .124 | -.045 | .094* |
| Commercial Curriculum | .024 | -.027 | .014 | 186* |
| College Preparatory Curriculum | -.033 | .021 | .026 | -.002 |
| Hours Spent in Homework | -.0001 | .003 | -.002 | -.009 |
| Hours in Extracurricular Activities | -.014 | -.024 | -.003 | -.024 |
| Sports | .011 | .048 | -.034 | -.027 |
| Work | .006 | | -.005 | |
| Math | -.050 | -.094* | .006 | .024 |
| Attitude Toward High School | -.030 | .003 | .002 | .052 |
| Teacher Encouragement | .027 | -.042 | -.004 | -.013 |
| Number of Children | -.013 | -.008 | .004 | .002 |
| Marital Status | -.013 | -.041 | .013 | -.074 |
| High School Graduate | .038 | -.012 | .036 | -.0008 |
| Training | -.021 | .093* | .00006 | -.060 |
| Work Experience | -.007 | .001 | -.006 | .0001 |
| Occupation | | | | |
| Constant | .466 | .430 | .130 | .308 |
| Adjusted R Square | .048 | .029 | .023 | .083 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-43: Proportion Female in Respondent's Occupation Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | .075 | .141 | .047 | .084 |
| Students Per Teacher | .001 | -.002 | .001 | -.006 |
| Expenditure Per Pupil | -.00002 | -.00004 | .000006 | .00003 |
| Southern Residence | .025 | .009 | .014 | .027 |
| Metropolitan Residence | .013 | .043 | .038* | .064 |
| Unemployment Rate | .003 | .002 | -.002 | .003 |
| Health Problem | -.010 | .036 | .037 | -.041 |
| Birth Cohort | -.012 | -.028 | -.004 | -.008 |
| Knowledge of World of Work | -.027 | .149 | -.020 | -.071 |
| Mother Worked for Pay | .001 | -.025 | | |
| Intact Family | .006 | .016 | .017 | -.030 |
| Parental Socioeconomic Status | .004 | .007 | -.003 | -.001 |
| Mother's Occupation | .073 | -.061 | .012 | -.004 |
| Father's Occupation | -.032 | -.013 | .134* | -.191* |
| Number of Siblings | -.005 | -.009 | -.003 | -.0006 |
| Farm Background | -.030 | -.044 | .006 | -.088* |
| Foreign-born | -.015 | -.157 | -.010 | -.143 |
| Parental Help | -.020 | .030 | -.025 | -.037 |
| Parents' Educational Goal | -.007 | -.073 | -.003 | .004 |
| Foreign Language | .020 | -.066 | -.002 | .067 |
| Other Family Income (000's) | -.004 | -.006 | .0001 | -.009* |
| IQ | .001 | -.0002 | .0002 | .004* |
| Worked in High School | .029 | .062 | -.017 | .027 |
| Friends in College | .017 | -.021 | .005 | .029 |
| Vocational Curriculum | -.195* | -.214* | -.018 | .012 |
| Commercial Curriculum | .032 | .048 | .030 | .081 |
| College Preparatory Curriculum | -.026 | .0006 | -.004 | .028 |
| Hours Spent in Homework | .005 | .036* | .002 | .004 |
| Hours in Extracurricular Activities | .003 | -.030 | -.010 | -.040* |
| Sports | .045* | -.017 | -.075* | .031 |
| Work | | -.004 | | -.025 |
| Math | -.047 | -.083 | .020 | .008 |
| Attitude Toward High School | .002 | -.019 | .003 | -.013 |
| Teacher Encouragement | -.015 | .071 | .007 | -.065* |
| Number of Children | .013 | -.0001 | -.001 | .005 |
| Marital Status | .054 | .012 | -.024 | -.040 |
| High School Graduate | .053 | -.026 | .003 | -.006 |
| Training | -.008 | -.020 | -.024 | -.010 |
| Work Experience | -.005 | -.006 | -.012* | -.022* |
| Occupation | | | | |
| Constant | .342 | .678 | .260 | .230 |
| Adjusted R Square | .032 | -.010 | .041 | .122 |

1/ Metric coefficients; * means coefficient is twice its standard error.



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Table C-44: Hourly Wages Three Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.119 | .899 | -.452 | .607 |
| Students Per Teacher | .0002 | -.075* | .007 | -.118* |
| Expenditure Per Pupil | .0003 | .0008* | .0004 | -.001* |
| Southern Residence | -.232* | -.617* | -.818* | -1.75* |
| Metropolitan Residence | .306* | -.067 | .104 | .348 |
| Unemployment Rate | .029 | .059 | .003 | .010 |
| Health Problem | -.069 | -.578* | -.375 | -1.02* |
| Birth Cohort | .176* | -.009 | .149 | .719* |
| Knowledge of World of Work | -.150 | .026 | .453 | -.730 |
| Mother Worked for Pay | -.019 | .092 | | |
| Intact Family | .020 | .241 | .012 | -.130 |
| Parental Socioeconomic Status | -.011 | .150* | .095* | -.097 |
| Number of Siblings | -.009 | -.040 | -.017 | .023 |
| Farm Background | -.149 | -.005 | -.149 | .533 |
| Foreign-born | .181* | .860 | .069 | -2.35* |
| Parental Help | .104 | .688* | .296 | 1.36* |
| Parents' Educational Goal | .209 | -.240 | .389* | -.187 |
| Foreign Language | .054 | .252 | .088 | -.300 |
| Other Family Income (000's) | -.01* | -.02 | -.02 | -.03 |
| IQ | .013* | -.013 | .0008 | -.003 |
| Worked in High School | -.0007 | -.012 | .099 | -.318 |
| Friends in College | -.021 | -.082 | -.091 | .042 |
| Vocational Curriculum | -.007 | -.737 | -.136 | .248 |
| Commercial Curriculum | .116 | .016 | -.395 | -.493 |
| College Preparatory Curriculum | -.004 | .102 | -.038 | -.294 |
| Hours Spent in Homework | .022 | .003 | -.091 | -.199* |
| Hours in Extracurricular Activities | .092* | -.036 | -.012 | .131 |
| Sports | .011 | .564* | .117 | .213 |
| Work | -.059 | -.107 | -.130 | .155 |
| Math | -.064 | -.058 | -.136 | .239 |
| Attitude Toward High School | .018 | .108 | .163 | .101 |
| Teacher Encouragement | .144 | -.092 | -.257 | -.240 |
| Number of Children | -.084 | .024 | .071 | -.143 |
| Marital Status | -.202* | .126 | .587* | .138 |
| High School Graduate | .359* | .438* | .260 | .814* |
| Training | -.047 | -.025 | -.047 | 1.22* |
| Work Experience | -.003 | .023 | .116 | -.108 |
| Occupation | -.138 | -.108 | -.900* | .122 |
| Constant | .878 | 2.33 | 2.20 | 6.81 |
| Adjusted R Square | .202 | .204 | .174 | .374 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-45: Hourly Wages Five Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex: Regression1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.175 | -4.98* | .222 | -.005 |
| Students Per Teacher | .002 | -.028* | .047* | -.001 |
| Expenditure Per Pupil | .0003* | .0009* | .0003 | -.0005 |
| Southern Residence | -.251* | -.264* | -.918* | -1.34* |
| Metropolitan Residence | .137 | -.064 | .426* | .429* |
| Unemployment Rate | .025 | .033 | .049 | .064 |
| Health Problem | -.199 | .061 | -.414 | -.653* |
| Birth Cohort | .024 | .014 | .214 | .111 |
| Knowledge of World of Work | -.353* | .257 | .054 | -.363 |
| Mother Worked for Pay | -.110 | -.046 | | |
| Intact Family | .142 | -.003 | .166 | .256 |
| Parental Socioeconomic Status | -.023 | -.005 | .083 | .108* |
| Number of Siblings | -.030* | .016 | -.069 | -.023 |
| Farm Background | -.132 | .210 | .025 | .210 |
| Foreign-born | .222* | -2.13* | -.257 | 1.240* |
| Parental Help | -.073 | .187 | -.096 | -.685* |
| Parents' Educational Goal | .013 | .234* | .239 | .081 |
| Foreign Language | -.018 | 1.30* | .036 | .074 |
| Other Family Income (000's) | -.01* | .06* | -.03* | .02 |
| IQ | .015* | .012* | .015* | -.012* |
| Worked in High School | .178* | -.395* | -.121 | -.353* |
| Friends in College | .012 | -.106 | .068 | .150 |
| Vocational Curriculum | -.529* | -.190 | .462* | -.365 |
| Commercial Curriculum | .221* | -.009 | -.454 | .641 |
| College Preparatory Curriculum | .024 | -.161 | -.216 | -.048 |
| Hours Spent in Homework | .003 | -.023 | -.025 | .342 |
| Hours in Extracurricular Activities | -.003 | .419* | .050 | .138* |
| Sports | .011 | .010 | -.367 | .188 |
| Work | -.244* | | .201 | |
| Math | -.164 | .508* | .008 | .251 |
| Attitude Toward High School | .055 | -.143 | -.123 | -.018 |
| Teacher Encouragement | .105 | -.027 | -.087 | .288 |
| Number of Children | -.165* | -.092* | -.088 | .101 |
| Marital Status | -.151 | -.460* | .748* | .210 |
| High School Graduate | .107 | .347* | .469* | .456* |
| Training | -.009 | -.127 | .056 | .189 |
| Work Experience | .082* | -.004 | .032 | .025 |
| Occupation | .085 | -.679* | -.752* | -.331 |
| Constant | 1.46 | 6.08 | -.206 | 3.070 |
| Adjusted R Square | .268 | .553 | .161 | .403 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-46: Hourly Wages Ten Years After High School, Respondents Not Enrolled in School in 1966/68, by Race and Sex: Regression 1/

| Predetermined Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Public School | -.619* | .429 | .412 | 1.84* |
| Students Per Teacher | .001 | -.017 | .033* | .027 |
| Expenditure Per Pupil | .0007* | .0003 | .0008* | .0000008 |
| Southern Residence | -.246* | -.914* | -.726* | -.917* |
| Metropolitan Residence | .331* | .150 | .291 | .942* |
| Unemployment Rate | -.029 | -.003 | .096* | .094* |
| Health Problem | -.090 | -.085 | .156 | -.508 |
| Birth Cohort | -.104 | -.203 | -.309 | -.104 |
| Knowledge of World of Work | -.422* | .526 | -.092 | .446 |
| Mother Worked for Pay | -.095 | .240 | | |
| Intact Family | .074 | .182 | -.060 | -.038 |
| Parental Socioeconomic Status | -.008 | .012 | .019 | .214* |
| Number of Siblings | -.054* | -.063* | .015 | -.058* |
| Farm Background | -.026 | .071 | -.059 | .098 |
| Foreign-born | .022 | 1.53* | .269 | -1.14 |
| Parental Help | .026 | .113 | -.015 | -.696* |
| Parents' Educational Goal | .243* | -.008 | -.002 | -.081 |
| Foreign Language | -.090 | .184 | .338 | .832 |
| Other Family Income (000's) | -.02* | -.01 | .003 | -.02 |
| IQ | .013* | -.024* | .027* | .022* |
| Worked in High School | .338* | .310 | .294 | -.468* |
| Friends in College | .058 | .209 | .233 | .100 |
| Vocational Curriculum | -.762* | -.672 | -.083 | .177 |
| Commercial Curriculum | .023 | .557* | -.384 | .281 |
| College Preparatory Curriculum | .353* | -.157 | .353 | -.042 |
| Hours Spent in Homework | -.052 | .100 | -.054 | .154* |
| Hours in Extracurricular Activities | -.090 | .052 | .237* | -.058 |
| Sports | -.028 | .543* | -.343 | .407 |
| Work | | -.306 | | .340 |
| Math | -.034 | -.019 | .105 | .050 |
| Attitude Toward High School | .097 | .364* | -.353 | -.079 |
| Teacher Encouragement | .086 | -.435* | -.331 | -.238 |
| Number of Children | -.145* | .0009 | -.229* | -.152* |
| Marital Status | .225 | .242 | .732* | .747* |
| High School Graduate | -.072 | -.128 | .431 | .525* |
| Training | .048 | .679* | .106 | .248 |
| Work Experience | .071* | .154* | -.033 | .080 |
| Occupation | -.846* | -.554 | -1.96* | -.900* |
| Constant | 3.12 | 3.69 | .456 | -.360 |
| Adjusted R Square | .252 | .272 | .155 | .470 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table C-47: Gross Contributions of Schools to Variance in Dependent Variables Ten Years After High School, Respondents Not Enrolled in School in 1966/68, by Race and Sex

| Dependent Variables | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Hourly Wage | .052 | .016 | .027 | .012 |
| Log Hourly Wage | .047 | .050 | .034 | .009 |
| Occupation | .003 | .002 | .007 | .044 |
| Employment | .007 | .004 | .012 | .076 |
| Annual Hours | .012 | .016 | .015 | .028 |
| Unemployment | .007 | .015 | .009 | .0002 |
| Work Experience | .008 | .054 | .002 | .012 |
| Training | .026 | .008 | .004 | .082 |
| High School Grad | .014 | .037 | .003 | .032 |
| Marital Status | .008 | .007 | .001 | .019 |
| Number of Kids | .004 | .025 | .005 | .036 |

# APPENDIX D:
# Description of Wage-Gap Analysis and Regressions on Which it is Based

## Appendix D

### Measures Used for the Decomposition of Wage Differentials [1]

R = raw differential

$$= \beta_o^H + \Sigma_j \beta_j^{H-H} \bar{x}_j - (\beta_o^L + \Sigma_j \beta_j^{L-L} \bar{x}_j) = E+C+U$$

E = portion of differential attributable to differing endowments

$$= \Sigma_j \beta_j^H (\bar{x}_j^H - \bar{x}_j^L)$$

C = portion of differential attributable to differing coefficients

$$= \Sigma_j \bar{x}_j^L (\beta_j^H - \beta_j^L)$$

U = unexplained portion of the differential = $\beta_o^H - \beta_o^L$

D = portion of the differential attributable to discrimination = C+U

Subtotal = E+C

Where:

H = high wage group (white males in this study)

L = low wage group (white females, black males, black females)

$Y_i^H = \beta_o^H + \Sigma \beta_j^H x_j^H + u_i^H$ = equation for high wage group

$Y_i^L = \beta_o^L + \Sigma \beta_j^L x_{ji}^L + u_i^L$ = equation for low wage group

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[1] From Blinder (1973).

Table D-1: Structural Analysis of the Wage Differential Ten Years After High School Between White Males and White Females, White Males and Black Females, and White Males and Black Males, Respondents Not Enrolled in School in 1966/68 and Completed 12 Years of Schooling or Less [1]

| Causal Factor | WHITE FEMALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients | BLACK FEMALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients | BLACK MALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients |
|---|---|---|---|---|---|---|---|---|---|
| Vocational | -.3 | -.7% | .4 | -.1 | -.6 | .5 | -.2 | .1 | -.3 |
| Commercial | 0 | 3.2 | -3.2 | -3.7 | 1.3 | -5 | -.9 | -.1 | -.8 |
| College | -1.7 | 0 | -1.7 | 0 | 0 | 0 | -.3 | 0 | -.3 |
| Southern Residence | -8.4 | 1.1 | -9.5 | 15.7 | 5.4 | 10.3 | 12.9 | 5.7 | 7.2 |
| Metropolitan Residence | -3 | -/9 | -2.1 | 0 | -1.4 | 1.4 | -14.1 | -1.6 | -12.5 |
| Unemployment Rate | 10.7 | -.8 | 11.5 | -2.9 | -.8 | -2.1 | 3.2 | -.4 | 3.6 |
| Occupation | 17.9 | 19.9 | -2.0 | 19.9 | 17.9 | 2.0 | -1.5 | 1.6 | -3.1 |
| Marital Status | 2.8 | -.1 | 2.9 | .3 | 3.8 | -3.5 | 1.1 | 3.1 | -2.0 |
| Work Experience | -22.2 | -4.5 | -17.7 | -29.9 | -4.6 | -25.3 | -27.8 | 0 | -27.8 |
| Health Problem | .1 | .2 | -.1 | 0 | .1 | -.1 | .7 | .2 | .5 |
| High School Graduate | 6.4 | -.2 | 6.6 | 4.4 | 1.0 | 3.4 | -2.8 | 1.8 | -4.6 |
| Training | 0 | .2 | -.2 | -2.0 | .2 | -2.2 | 0 | .1 | -.1 |
| Number of Children | 2.8 | 3 | -.2 | -4.4 | 4.6 | -9.0 | .6 | .6 | 0 |
| Birth Cohort | -9.3 | -.3 | -9.0 | 6.8 | 0 | 6.8 | -8.1 | .8 | -8.9 |
| Worked in High School | -.3 | .6 | -.9 | 1.2 | 1.2 | 0 | 5.9 | .5 | 5.4 |
| Number of Siblings | 5.2 | -.3 | 5.5 | 5.4 | .4 | 5.0 | 5.6 | .3 | 5.3 |
| Public School | 22.8 | .2 | 22.6 | -13.7 | -.2 | -13.5 | -14.0 | -.2 | -13.8 |
| Students Per Teacher | 11.9 | -.7 | 12.6 | 35.0 | -.7 | 35.7 | .8 | -1.4 | 2.2 |
| Expenditure Per Pupil | -7.6 | 1.1 | -8.7 | 1.5 | 1.5 | 0 | 9.3 | .4 | 8.9 |
| IQ | -2 | -2 | 0 | 55.8 | 4.5 | 51.3 | 12.4 | 4.2 | 8.2 |
| Sports | .4 | .1 | .3 | -2.5 | .1 | -2.6 | -6.5 | 0 | -6.5 |
| Other Family Income (000's) | 7.7 | 2.2 | 5.4 | 9.3 | .6 | 8.7 | 1.8 | -.2 | 2.0 |
| Sublotal | 33.8% | E=21.3% | C=12.5% | 96.1% | E=34.3% | C=61.8% | -21.9% | E=15.5% | C=-37.4% |
| Shift Coefficient | U=12.8% | | | U=-5.9% | | | U=44.0% | | |
| Total | R=46.6% | | | R=90.2% | | | R=22.1% | | |
| | D=C+U=25.3% | | | D=C+U=53.9% | | | D=C+U=6.6% | | |

[1] Based on Natural Logarithm of Structural Hourly Wage Equation.

Table D-2: Reduced Form Analysis of the Wage Differential Ten Years After High School Between White Males and White Females, White Males and Black Females, and White Males and Black Males, Respondents Not Enrolled in School in 1966/68 and Completed 12 Years of Schooling or Less[1]

| Causal Factor | WHITE FEMALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients | BLACK FEMALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients | BLACK MALES Amount Attributable | Amount Attributable to Endowments | Amount Attributable to Coefficients |
|---|---|---|---|---|---|---|---|---|---|
| Southern Residence | -2.8 | 1.0 | -3.8 | -6.9 | 5.1 | -12.0 | 8.1 | 5.4 | 2.7 |
| Metropolitan Residence | -4.1 | -.7 | -3.4 | 3.4 | -1.0 | 4.4 | -17.8 | -1.2 | -16.6 |
| Unemployment Rate | 12.4 | -.9 | 13.3 | 2.6 | -1.0 | 3.6 | .8 | -.5 | 1.3 |
| Health | .2 | .2 | 0 | 1.1 | .1 | 1.0 | -2.1 | .2 | -2.3 |
| Birth Cohort | -10.9 | -.2 | -10.7 | -13.0 | 0 | -13.0 | -14.3 | .6 | -14.9 |
| Parent's Socioeconomic Status | 12.7 | -.1 | 12.8 | 20.0 | 1.4 | 18.6 | -22.0 | 1.4 | -23.4 |
| Mother's Occupation | 14.3 | -.8 | 15.1 | -6.9 | -2.0 | -4.9 | 12.4 | -1.6 | 14.0 |
| Father's Occupation | -3.9 | 1.3 | -5.2 | -1.5 | 5.0 | -6.5 | -4.6 | .3 | -4.9 |
| Number of Siblings | 5.5 | 0 | 5.5 | 1.9 | .4 | 1.5 | 5.6 | .3 | 5.3 |
| Foreign-born | -.5 | 0 | -.5 | .6 | 1.3 | -.7 | 1.8 | 1.3 | .5 |
| Parent Help | -2.8 | 0 | -2.8 | -1.4 | 0 | -1.4 | 4.5 | .2 | 4.3 |
| Parents' Educational Goal | .4 | 0 | .4 | -2.9 | -.3 | -2.6 | 1.4 | 0 | 1.4 |
| Public School | 27.5 | .1 | 27.4 | -27.9 | -.2 | -27.7 | -16.7 | -.2 | -16.5 |
| Students Per Teacher | 7.8 | -.6 | 8.4 | 47.7 | -.6 | 48.3 | -3.4 | -1.2 | -2.2 |
| Per Pupil Expenditure | -7.6 | 1.1 | -8.7 | 10.5 | 1.5 | 9.0 | .4 | .4 | 0 |
| IQ | -12.4 | -2.4 | -10.0 | 52.4 | 5.4 | 47.0 | 24.8 | 8.4 | 16.4 |
| SubTotal | 35.8% | E=-2% | C=37.8% | 79.7% | E=15.1% | C=64.6% | -21.1% | E=13.8% | C=-34.9% |
| Shift Coefficient | U=24.8% | | | U=-32.0% | | | U=29.7% | | |
| Total | R=60.6% | | | R=47.7% | | | R= 8.6% | | |
| | D=C+U=62.6% | | | D=C+U=32.6% | | | D=C+U=-5.2% | | |

[1] Based on Natural Logarithm of Reduced Form Hourly Wage Equation.

Table D-3: Natural Logarithm of Hourly Wages Ten Years After High School, Respondents Not Enrolled in School in 1966/68, by Race and Sex, Modified Structural Equation: Regression

| | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Vocational | -.258* | -.170 | -.051 | -.035 |
| Commercial | .010 | .195* | -.103 | .155 |
| College | .138* | -.001 | -.008 | .043 |
| Southern Residence | -.093* | -.317* | -.158* | -.265* |
| Metropolitan Residence | .147* | .092 | .113* | .294* |
| Unemployment Rate | -.014* | .009 | .006 | .0004 |
| Occupation | -.298* | -.355* | -.326* | -.155 |
| Marital Status | .111* | .207* | .146* | .178* |
| Work Experience | .029* | .047* | -.009 | .020 |
| Health Problem | -.040 | -.039 | -.053 | -.109 |
| High School Graduate | .007 | .033 | .090* | .182* |
| Training | .039 | .199* | .018 | .024 |
| Number of Children | -.034* | .005 | -.035* | -.035* |
| Birth Cohort | -.002 | .014 | -.047 | -.007 |
| Worked in High School | .081* | .051 | .054 | -.097* |
| Number of Siblings | -.020* | -.012 | -.002 | -.013 |
| Public School | -.163* | .215 | .077 | .216 |
| Students Per Teacher | .0010 | -.010 | .007* | .006 |
| Expenditure Per Pupil | .0002* | .0001 | .0001* | .000005 |
| IQ | .005* | -.0009 | .005* | .004* |
| Sports | -.019 | .074 | .003 | .086 |
| Other Family Income (000's) | -.010* | -.02* | -.004 | -.010 |
| Constant | .716 | .903 | .844 | .404 |
| Adjusted R Square | .252 | .325 | .201 | .382 |

1/ Metric coefficients; * means coefficient is twice its standard error.

Table D-4: Natural Logarithm of Hourly Wages Ten Years After High School, Respondents Not Enrolled in 1966/68, by Race and Sex, Reduced Form Equation: Regression

| | White Women | Black Women | White Men | Black Men |
|---|---|---|---|---|
| Southern Residence | -.049 | -.334* | -.149* | -.189* |
| Metropolitan Residence | .140* | .020 | .086* | .326* |
| Unemployment Rate | -.012* | .002 | .007 | .005 |
| Health | -.047 | -.174 | -.051 | -.204* |
| Birth Cohort | .020 | .029 | -.034 | .033 |
| Parents' Socioeconomic Status | -.004 | -.014 | .009 | .038* |
| Mother's Occupation | -.126* | .172 | .107* | -.087 |
| Father's Occupation | .033 | -.074 | -.316* | .092 |
| Number of Siblings | -.020* | -.005 | -.002 | -.013 |
| Foreign-born | .066 | .385 | .049 | -.214 |
| Parent Help | .078 | -.014 | -.049 | -.215* |
| Parents' Educational Goal | .048 | .141* | .061 | .012 |
| Public School | -.205* | .369 | .086 | .253 |
| Students Per Teacher | .002 | -.017* | .006 | .007 |
| Per Pupil Expenditure | .0002* | -.000009 | .0001* | -.0001 |
| IQ | .007* | .0006 | .006* | .004* |
| Constant | .405 | .973 | .653* | .356 |
| Adjusted R Square | .143 | .167 | .168 | .340 |

1/ Metric coefficients; * means coefficient is twice its standard error.

APPENDIX E:
Technical Appendix -- Pairwise Deletion

APPENDIX E
TECHNICAL APPENDIX

## Pairwise Deletion of Missing Cases

Pairwise deletion of missing cases was used in all regressions, for two reasons: first, it is cost effective, and second, it is simpler. Twelve correlation matrices representing the three samples and the four sex-race combinations were developed for the regressions (see text, Table 6). Data for individuals at each of the different time points were included in the same matrix. This saved both in the cost of creating matrices, and in programming time. In addition, it reduced the complexity of the analyses for researchers. However, since not all individuals are in each sample at all time points (see Appendix B, Tables 1-8), listwise deletion would have eliminated practically all cases. For this reason, a pairwise strategy was employed throughout.

The regressions were planned carefully in advance of analysis. Only those variables applicable for a particular sample at a particular time point or points were employed at the same time. As a check on the accuracy of this strategy, the effective number of cases on which each correlation was computed was calculated (by the computer program) and checked against the other correlations used in each separate regression. Unfortunately there is no systematic way to calculate the effective N on which any single regression is based. Assuming that data missing from any one of these samples is missing essentially at random, as effective N's we used the total number of individuals in each sample (text Table 6 ).

Given the specificity of our samples and the low rate of sample attrition (see Appendix B, Tables 1-8), this is not an unreasonable assumption, nor an unreasonable strategy. (Other researchers have followed the same strategy, Griffin and Alexander, 1978, for example.) However, the reader is cautioned that violation of this assumption for any given variable would bias the coefficient for that variable. A large number of explanatory variables were used in each regression. (We have erred on the side of overspecification rather than underspecification, since the errors of underspecification are more serious.) In addition, the coefficients do not appear to vary significantly under different specifications. Thus we believe bias in coefficients due to use of pairwise deletion to be relatively small.

The more serious question raised by the use of the total sample N as the effective N is that of its effect on the standard error. Increasing the "N" will reduce the standard error, thus raising the possibility that a result not previously statistically significant will become so. Since sample sizes are rather large for both white women and white men, I don't think that this poses a threat to the reporting of

results for whites. For blacks, with many fewer cases, this is a problem, however. In those regressions in which the total explained variance for the equations for black women or men or the total number of significant variables appeared excessively high, given the results for whites, the results are not described here.